Peregrinus Hierusalemsis

THE PRINCESS OF THE WRAITHS©

an herbal, bestiary, human zoo, and memoir

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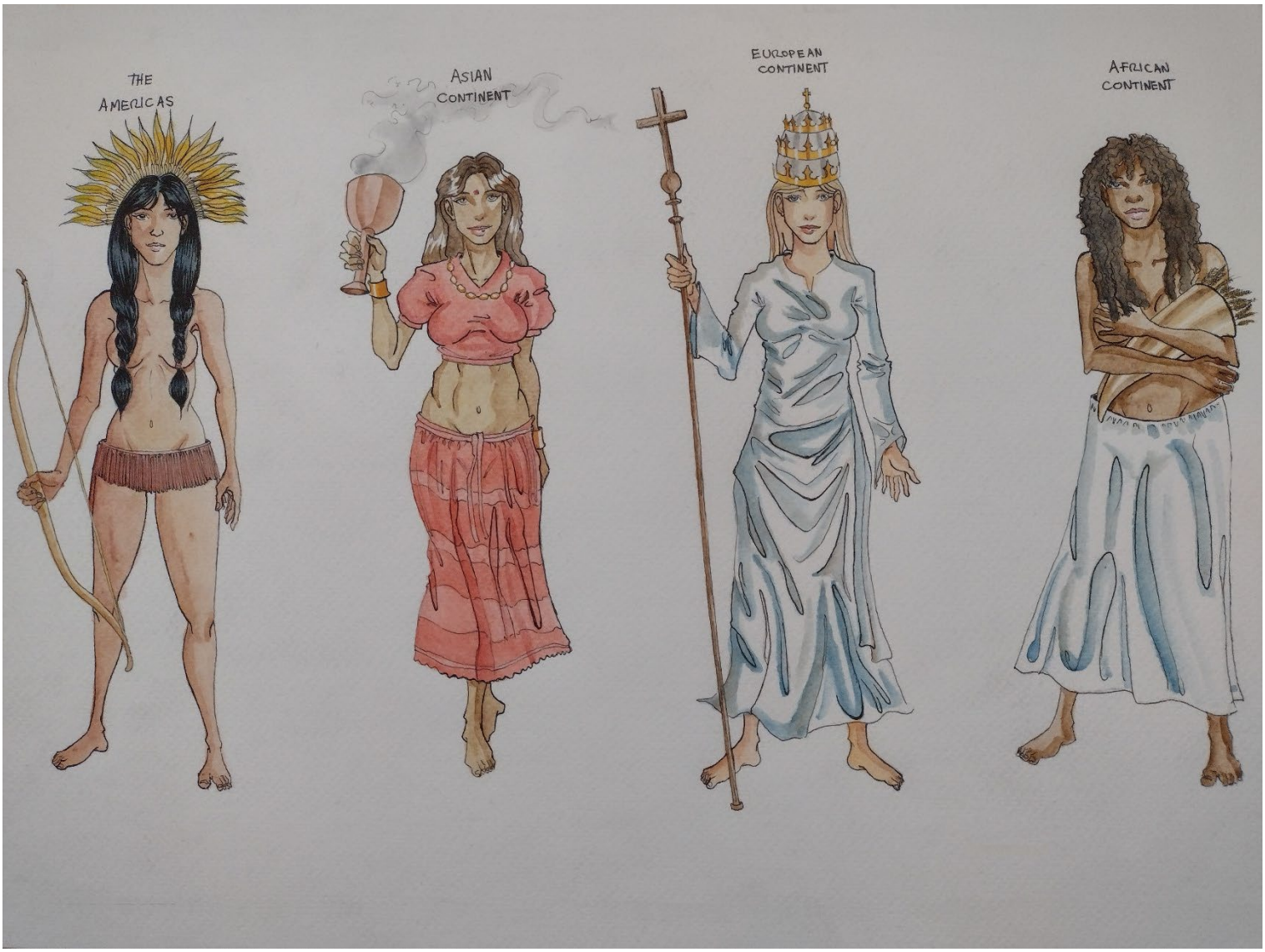

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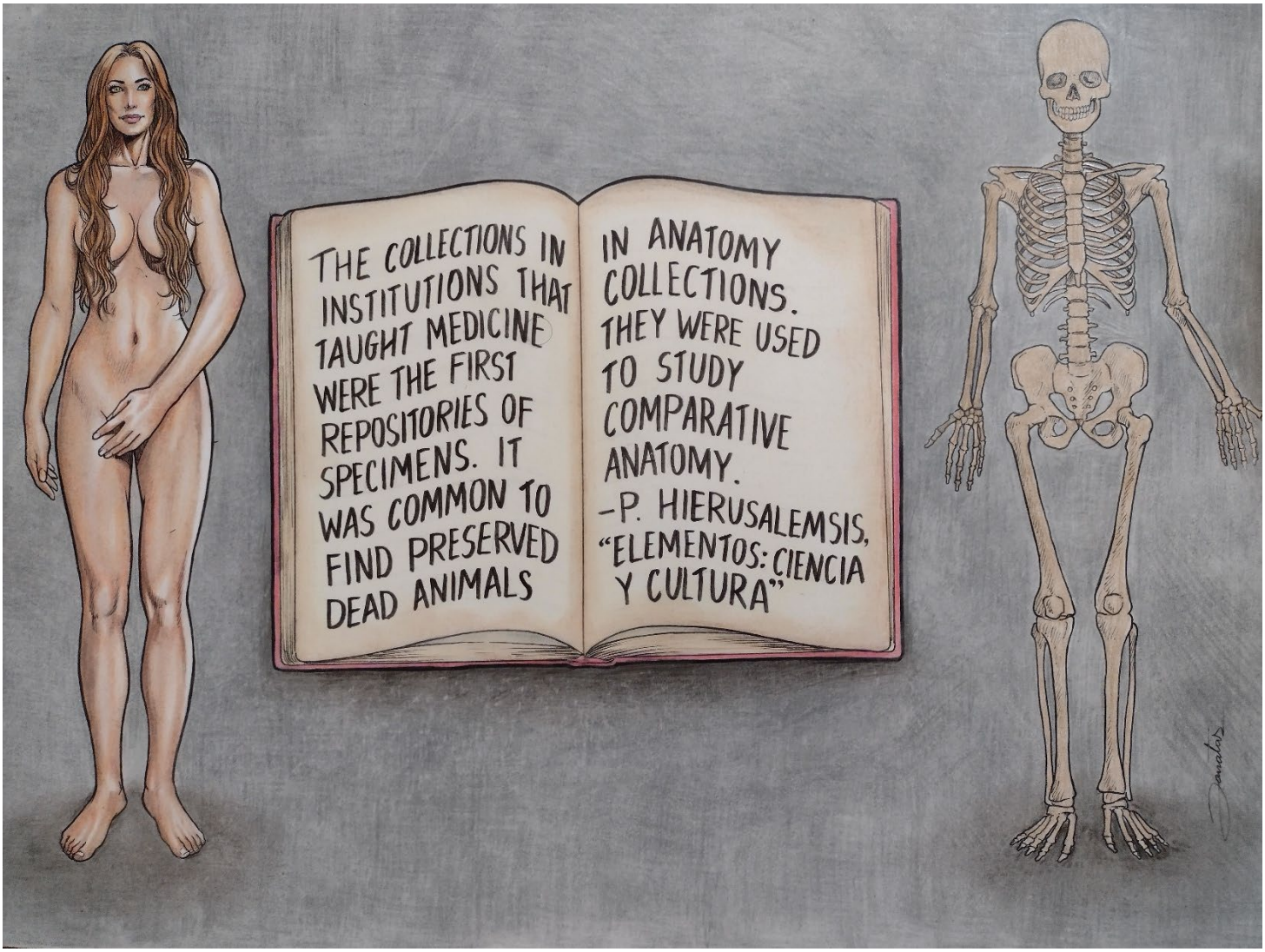
THE COLLECTIONS IN INSTITUTIONS THAT TAUGHT MEDICINE WERE THE FIRST REPOSITORIES OF SPECIMENS. IT WAS COMMON TO FIND PRESERVED DEAD ANIMALS
IN ANATOMY COLLECTIONS. THEY WERE USED TO STUDY COMPARATIVE ANATOMY.
-P. HIERUSALEMSIS, "ELEMENTOS: CIENCIA Y CULTURA"

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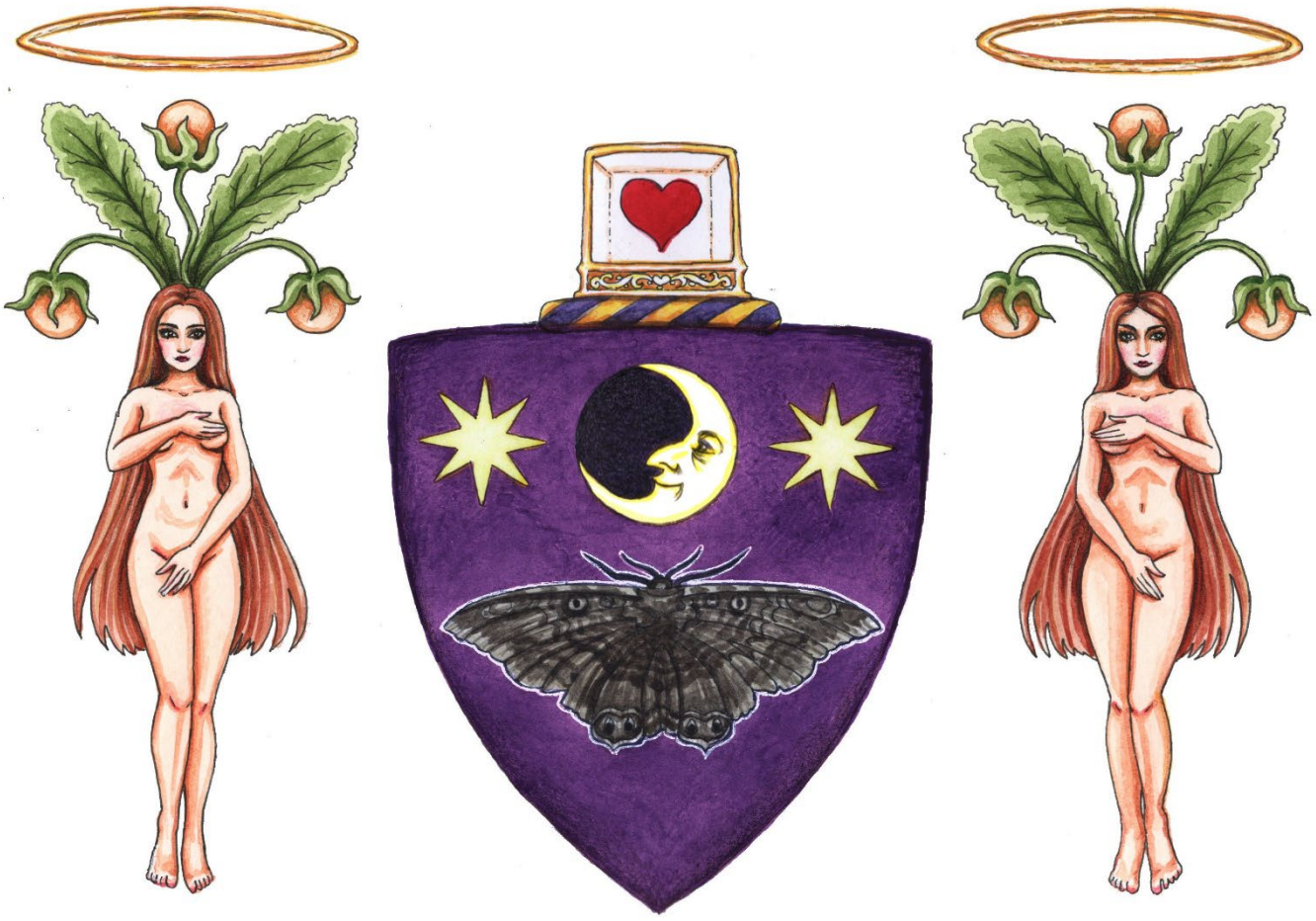

PEREGRINUS HIERUSALEMSIS

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ABSTRACT

This book is about life. It is about existential questions, science, and spirituality. It does tell a story. It is not an essay. It is written in a way that allows non-specialists to understand it and to be enjoyable as literary non-fiction. However, its academic rigor has been maintained throughout the text. It is a memoir. Therefore, all the adventures truly happened. I am a male biologist. I describe the cultural experiences that I lived while growing up in Mexico between the years 1984 and 2002. I also discuss my later life in the United Kingdom and Sweden. During this time, the 2000s culture is explored. This text was not written or illustrated using artificial intelligence. You will meet the title character in the final chapter. The chapters and appendices more related to science are the following ones:

Chapter 19: This is an introductory essay on earth sciences, biology, and medicine.

Appendix C: A description of the Natural History Museum of Mexico City in the 1980s and 1990s, including an outline of its previous history.

Appendix F: The public perception of Charles Darwin in the United Kingdom from the point of view of folklore.

Appendix G: Will it be possible to decipher all the traits of a multicellular organism from the sequence of its genome alone in 20 years' time?—an honors dissertation submitted in partial fulfillment of the requirements for the degree of Bachelor of Science at the University of Edinburgh.

Appendix H: A checklist of non-avian dinosaurs and birds (Clade Dinosauria) species mentioned in this book, including references to type specimens and designation of new type specimens.

Appendix I: Classification of non-bacterial cellular organisms known in 2025.

Citation: Peregrinus Hierusalemsis (2025) *The Princess of the Wraiths: an herbal, bestiary, human zoo, and* memoir. Miami: Books to Hook Publishing, LLC.

Data Availability: No datasets were generated or analyzed during the current study. All relevant data from this study is hereby being made available.

Competing interests: The author declares that no competing interests exist.

This book was simultaneously published as a hardcover and as an online PDF/A. New Scientific names fulfill the ICZN requirements for both printed books and electronic documents.

Date of publication: Saturday the 21st of June 2025 Anno Domini

ZooBank LSID: urn:lsid:zoobank.org:pub:D0175613-7A77-4DB2-913B-43BD737932D2

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

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THE PRINCESS OF THE WRAITHS:

an herbal, bestiary, human zoo, and memoir

Written by Peregrinus Hierusalemsis

Published by Books to Hook Publishing, LLC.

18117 Biscayne Blvd Suite #4411, Miami, FL 33160, United States of America

https://bookstohook.com/

Date of publication: Saturday the 21st of June 2025 Anno Domini

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ISBN 979-8-89283-269-4

All the illustrations were especially commissioned for this book.

This is the untranslated first edition of this book. It is written in 21st-century English.

It is written using the free and open-source typefaces New Athena Unicode, October Crow, PT Serif, EB Garamond, Roboto, Noto Sans Egyptian Hieroglyphs, and IBM Plex Sans.

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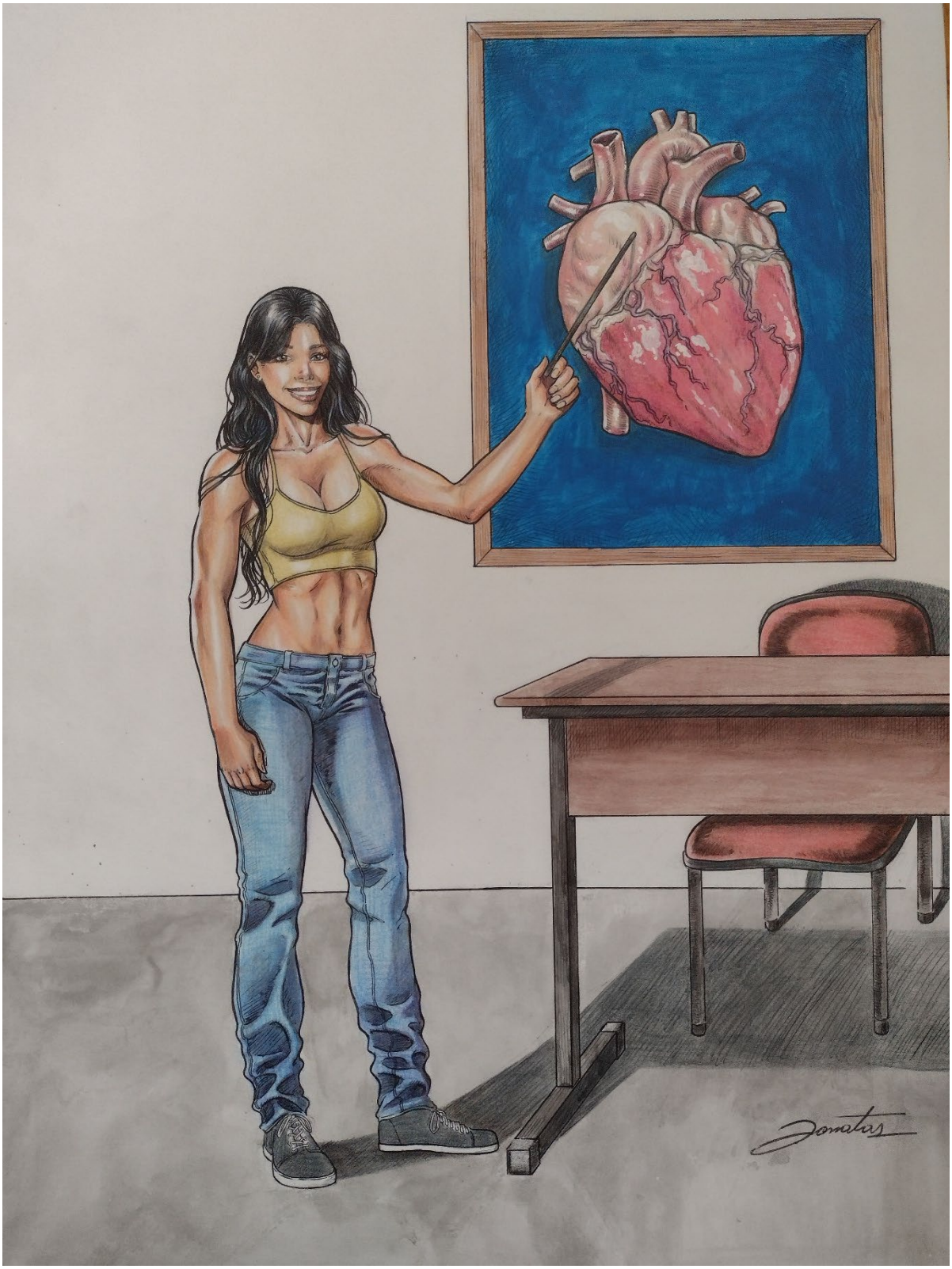

Human Heart

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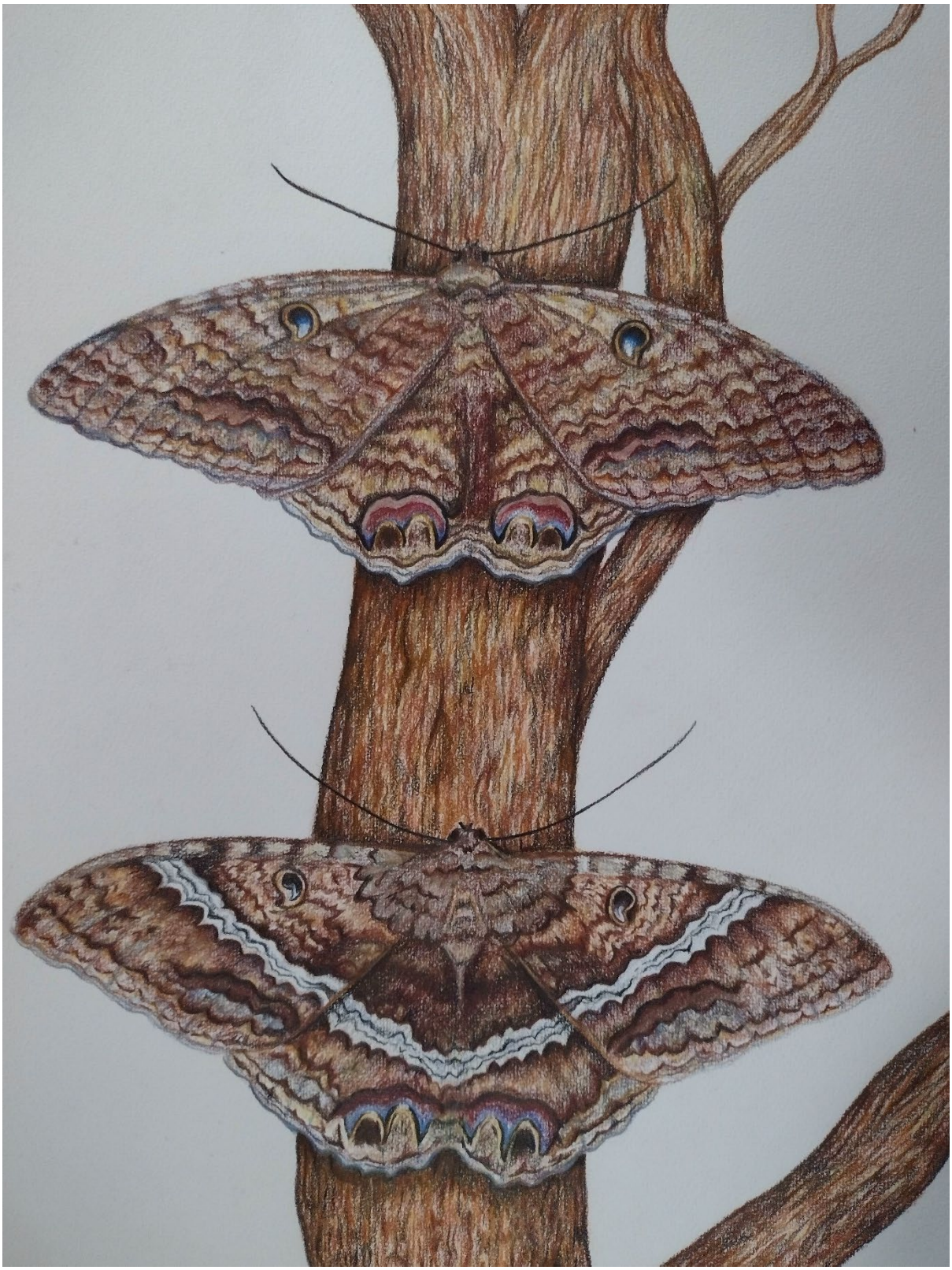
DEDICATION

The pre-Socratic philosopher Thales of Miletus once said, “All things are full of Gods.” Amongst these, there is a group of celestial damsels that have more ingenuity. They are Clio, Euterpe, Thalia, Melpomene, Terpsichore, Erato, Polyhymnia, Urania, and Calliope. They are the nine gorgeous maidens blessed with radiant beauty living happily on Mount Helicon. This text is dedicated to them.



***Ascalapha odorata* (Linnaeus, 1758) (Lepidoptera: Erebidae)**

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Unicorn

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ACKNOWLEDGMENTS

This book was written using open-source typefaces. Typeface "New Athena Unicode" (2002) was designed by Jeffrey Rusten, Ralph Hancock, and Donald Mastronarde. Typeface "October Crow" (2010) was designed by Chad Savage. Typeface "PT Serif" (2010) was designed by Alexandra Korolkova, Olga Umpeleva, Vladimir Yefimov, and the ParaType type foundry. Typeface "EB Garamond" (2011) was designed by Claude Garamond, Robert Granjon, Georg Mayr-Duffner, and Octavio Pardo. Typeface Roboto (2011) was designed by Christian Robertson, the ParaType type foundry, and the Font Bureau type foundry. Typeface "Noto Sans Egyptian Hieroglyphs" (2013) was designed by the ancient Egyptian God Thoth the Trismegistus and by the Monotype Imaging type foundry. Typeface "IBM Plex Sans" (2017) was designed by Mike Abbink and the Bold Monday type foundry.

This book recounts the teachings of my three mystical teachers. It explains how I internalized and applied such teachings to my life until I became a philosopher. Thus, I thank my three philosophy teachers for all their gnosis. I am also thankful for all the blessings I have received from the last two. Likewise, I thank the last one of them for giving me her heart with a flower of *Rosa*. The first part of this book describes my first teacher's doctrine. The second part of this book describes my second teacher's doctrine. The doctrine of my last teacher is defined in the third part of this book.

This book would not exist without my conversations with Mariana from 2000 to 2001. I had such conversations using the ICQ online chat by America Online (AOL). In such chats, the format of this book was pioneered. Such a format comprised mixing folklore, historical chronicles, my autobiography, and legal explanations of the teachings of my second teacher, my spiritual master. Mariana's online chat served the same legal purposes as this text, which is the law of life for me.

I thank Peregrinus Hierusalemsis, myself, the author, for being the art director and concept artist of this book.

A significant part of this autobiography comes from my extracts in email (electronic mail) messages. Such messages were sent to Olivia, Gabrielė Indrišiūnaitė, and Asia the Mystic.

Appendix G is the dissertation that I submitted to The University of Edinburgh in 2009. The copyright and all rights over such dissertation belong to me, the author of this book, according to the regulations of the University of Edinburgh.

The fourth part of this book includes a letter sent to me by Asia the Mystic and some SMS (short message service) text messages that I sent to Birgitta the Second, the villain at the end of this adventure.

Angel Girl

Illustration made by Sara Galián (SarAngelyst). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 851.**

I would like to thank Brooke, the alpha reader of this book. I would like to thank the following beta readers: Rosemary Lawton, Nicole Boccelli, Tiffany Shand, and Haley Larkin.

I, the author, have bought all the rights to the copyright of all the illustrations in this book. I purchased them directly from all the illustrators who worked on this project. I, Peregrinus Hierusalemsis, am one of the illustrators of the book. The other illustrators are Kasia Burzmińska (kiko-sempai), Hugo Arboleya, Jonatas Ferreira, Michelle Maiden, Irina Korobeichuk, Abigail Castro Cruz, Cornelia Papendick, Sara Galián Cárceles (SarAngelyst), Michael McDaniel, Yu Liu, Albino Adelaido Luna, Anastasia Liogka, Alan Monroy Ojeda, Néstor E. Altamirano (Camus Altamirano), Aslam Narvaez, Rafael Calderón, Līga Kļaviņa-Raiska, Javier Montesinos Medrano, Cookie-Chocoladka, Elvia Esparza, Jo Herbert, Galina Loseva (Glam Beckett), Radka Bošková, Patricia Chu, Kristina Kozlova (Princess Ailish), Valentina D'Onofrio (Nahima), Anna Maria Rupp (MangaWitch), Adriana Carrazco Salgado (adrialychnis), Lisa Saukel (Lighane), Paloma Díaz Gutierrez (Balandis), Yuliia Fomina, Karolina Heikura (Larienne), Yasamin Rahmani (Madam Aphrodite), Elen Stefanidou (Ansekenamun), Lorena Medina, Erick Olvera Lemus (Taner), Helga Nagy (Lèda Havasi), Megan McDermott (Violet Vyxen), Marta (Hagane), Ignacio Panelo, Alaitz Uriagereka Blanco (Anima Eterna), Dorina Neméskeri, and Kenneth Day.

I want to thank the staff at Papalote Museo del Niño, Mexico City, for providing information regarding the species depicted as sculptures in their museum collection. I want to thank Sergio Zamudio Ruiz for determining a *Yucca guatemalensis* hort. ex Baker (Asparagales: Asparagaceae). This species is grown in a city park known as Segunda Sección de Chapultepec, where there was a scenic train. (Please see the glossary to understand what "hort." means as an author.) I thank Rodolfo Pérez Rodríguez for helping me to reconstruct the colors of the extinct species of fish *Algansea barbata* Álvarez del Villar & Cortés (Cypriniformes: Leuciscidae). I thank Arne Ghys for determining a seashell of *Argopecten irradians* (Lamarck) (Pectinida: Pectinidae). This is the species of mollusk that was given to me as a gift by Davide Figini. I thank Christiane Weirauch for determining a *Rasahus hamatus* (Fabricius) (Hemiptera: Reduviidae). This is the species of Reduviid that bit me in 2012.

I made use of the following collections and archives to do historical research for this book: Internet Archive; United States National Library of Medicine; Biodiversity Heritage Library; Missouri Botanical Garden; Royal Botanic Gardens, Kew; University of Edinburgh; and Universidad Nacional Autónoma de México.

The acknowledgments for appendices F, G, and H are not listed here but at the end of each respective appendix.

Demoness

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THIS BOOK IS SPECIAL; PLEASE READ THIS ONE-PAGE PREFACE BEFORE READING IT.

This book is about the meaning of life, the natural environment, philosophy, science, pseudoscience, good, evil, light, darkness, spirituality, magic, and Western esotericism.

As this book is a memoir, I have also written about my trips during holidays, about the love stories I experienced, and about the antagonists I faced. These enemies of course include the witchy title character, the scariest foe I have ever faced. In this book I attempt to describe reality both from a scientific perspective and from a spiritual one. Hence, you can learn here a lot about the worldview of secular science. On the other hand, if you are a believer and use it rightly, it can teach you secret knowledge to practice mysticism or magic. I do not attempt to convince you to believe in any worldview. That is your choice.

If you want to obtain wisdom from this book, you should not read it as you would read anything else. This book is NOT to be read by quickly looking for the main ideas in each paragraph. To attain its hidden wisdom, you should slowly read each sentence until reaching the end of each paragraph. No word should be skipped or omitted. Always do this as slowly as you can. Read from where you stopped previously, reading to the paragraph that you have set as your goal without reading any other text, such as messages from your friends, social media posts, or websites, beforehand. After reaching your goal, you can rest, watch a video, or read whatever else you want. This way of reading might be unusual, but I promise you that you will attain gifts you do not expect or even imagine if you follow it. Not every book should be read like this.

This book was not written or illustrated using artificial intelligence. All art is traditional, not digital. The only exception is the digital art I, the author, made. However, it was not done using artificial intelligence.

If you prefer to read printed text and do not want to read this hardback book in a library or museum, feel free to print the pages that you wish to read. Some companies that print university theses and dissertations print plenty of pages at a lower price than using a home printer.

Welcome Illustration

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THE PRINCESS OF THE WRAITHS

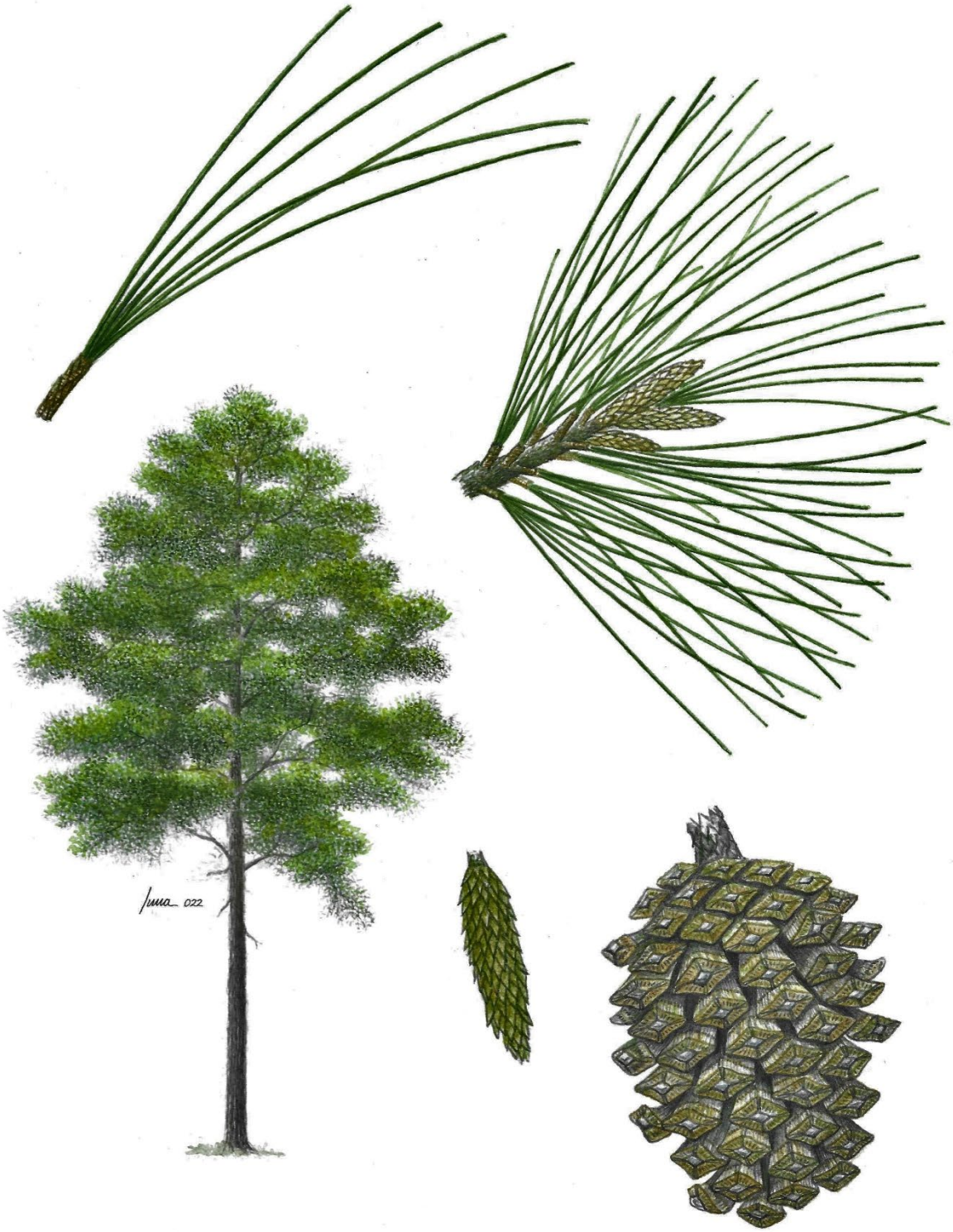
"El Durazno, Tamazula, Durango

November 14, 1981

Mom:

We are on a hill in the mountains of Durango, which resembles the memories you have of your childhood land. The trees are pines (*Pinus*) of those that produce cones and throw the ocoxal. With the water from the rain and the fog, you can perceive the double smell that emerges both from the *Pinus* themselves and from the burned wood."

—Jorge Reyes Mejía, my uncle, wrote when he was a lieutenant colonel in the Mexican Army while in the Sierra Madre Occidental.



***Pinus durangensis* Martínez, 1942 (Pinales: Pinaceae)**

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Portrait of Jorge Reyes Mejía, my uncle

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***Pterophyllum scalare* (Schultze, 1823) (Cichliformes: Cichlidae)**

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A Supernatural Death

A rainy night in Atzitzimititlán, Tlaxcala, Mexico. The year was 1946.

Jorge: Dad! I spent all day with my cousin Jaime. We went to the Zahuapan River. Jaime told me that there's a lovely waterfall in Atlihuetzia. We're going to visit it tomorrow!

Tomás: Do not go to Atlihuetzia waterfall. You are forbidden to go there!

Jorge: I don't think it would be more dangerous than this town's agricultural fields and river. Even here, there are dangers, such as venomous snakes, but that isn't a good reason to avoid the countryside. We simply need to be cautious.

Tomás: You are still a young boy. There are several things that you cannot understand well. The evil found in such a place does not belong to this world. There is a cave in the rocks that is close to the Atlihuetzia waterfall. At the entrance of such a cave, there are rock paintings that have always been there. They were there even before the Spanish conquistador, Hernán Cortés, arrived in the 16th century. Such red paintings depict men with horns.

Jorge: Red men with horns?

Tomás: Indeed, they are demons. They are evil spirits that, in our Christian Catholic religion, fight against the law of God. They want to lead humanity to the wrong path, the path of disobedience, the path of going against the commandments of God. The act of going against the law of God is known as sinning. When a human sinner dies, the soul of such a person leaves the body. Hence, the body becomes a corpse. The soul of the sinner is tortured in Hell as a punishment for the sins committed during life. The soul is what brings life to a body. All personality and thoughts also come from the soul. The soul can live out of the human body as a ghost.

Nevertheless, the body cannot live without a soul. Demons wish that all humanity would be eternally punished in Hell. That is why they offer temptations to humans so they can sin. Between the two demons of the rock painting, a goat is depicted. They are leading such a goat. Such a goat is not truly a goat. It is a symbol that represents the soul of a sinner who is led to Hell by the demons.

Jorge: How can you know such paintings are not only art that an ancient Indigenous person made? Maybe there isn't anything terrible in such a cave.

Tomás: A peasant went inside such a cave to satisfy his curiosity. He wanted to know what was inside. Inside the cave was a casino where the Devil played games with rich

***Crotalus ravus* Cope, 1865 (Squamata: Viperidae)**

Illustration made by Camus Altamirano. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 852.**

men. Such men made deals with the Devil. That is why they were so filthy rich.

Jorge: Does the Devil exist? I thought he was a bogeyman invented to scare children like the Coco.

Tomás: He truly exists. He is the prince of all demons. He does not have a body, as we humans do. He is a spiritual being. The Devil, like all his demons, does not die or suffer from physical pains or illnesses, as he is not made of flesh like us. He can control nature and human society with his mighty magic. He is the enemy of humanity and the prince of evil.

Jorge: So how could the Devil play inside a casino if he doesn't have a body?

Tomás: He uses his magic to make himself visible to human eyes as if he genuinely had a body.

Jorge: Who were the rich men who played games with the Devil?

Tomás: They were sinners. They were the most powerful landowners who enslaved the poor.

Jorge: So, are all sinners rich?

Tomás: Not all of them. There are several paths to sin, all leading to eternal punishment. But not all the ways of sin are equally pleasant. The Devil abducted my father, your grandfather, Abraham Reyes, and he was never rich...

Jorge: How did it happen?

Tomás: He was a drunk man. He was always drunk.

Jorge: Well, the fact that he was always drunk and that he died due to alcoholism doesn't mean the Devil abducted him. He was simply killed by an extremely dangerous drug that killed a lot of men.

Tomás: Your grandfather did not die due to a chronic illness because of drinking too much alcohol. His death was a supernatural event. That is why I know the Devil exists and is not an imaginary character.

Jorge: How did he die?

Tomás: Sometimes, my mom, Asunción, needed to look for him when he was too drunk. She helped him to come back to the house. One time, on the way home, they approached a ravine with very steep rock walls. At that point in the path, Abraham used to walk toward the ravine. Mama Asunción used to tell him: "What are you doing? You are going to kill yourself!" Abraham used to reply to her: "I see a beautiful path that is by far better than the one we are following, and someone is calling me there." One day, Mama Asunción did not go look for him. She stayed at home that day with her children. The next day, a flock of vultures flew in circles around a human corpse inside the ravine. It was the corpse of my father, Abraham. It is highly likely that the night before, he saw the illusory path that was better than the real one, the false path where someone was calling him. He

followed such a path, and the only thing he found was his own death. The Devil created such delusion to abduct his soul to Hell.

Jorge: And what can I do to avoid being abducted by the Devil?

Tomás: It is of utmost importance not to go to the Atlihuetzia waterfall. Moreover, you must participate in all the rituals and parties the Church organizes. You must also follow all the advice that I and your mother Lorenza give you. “Et ne nos inducas in tentationem, sed libera nos a malo. Amen.”

INTRODUCTION

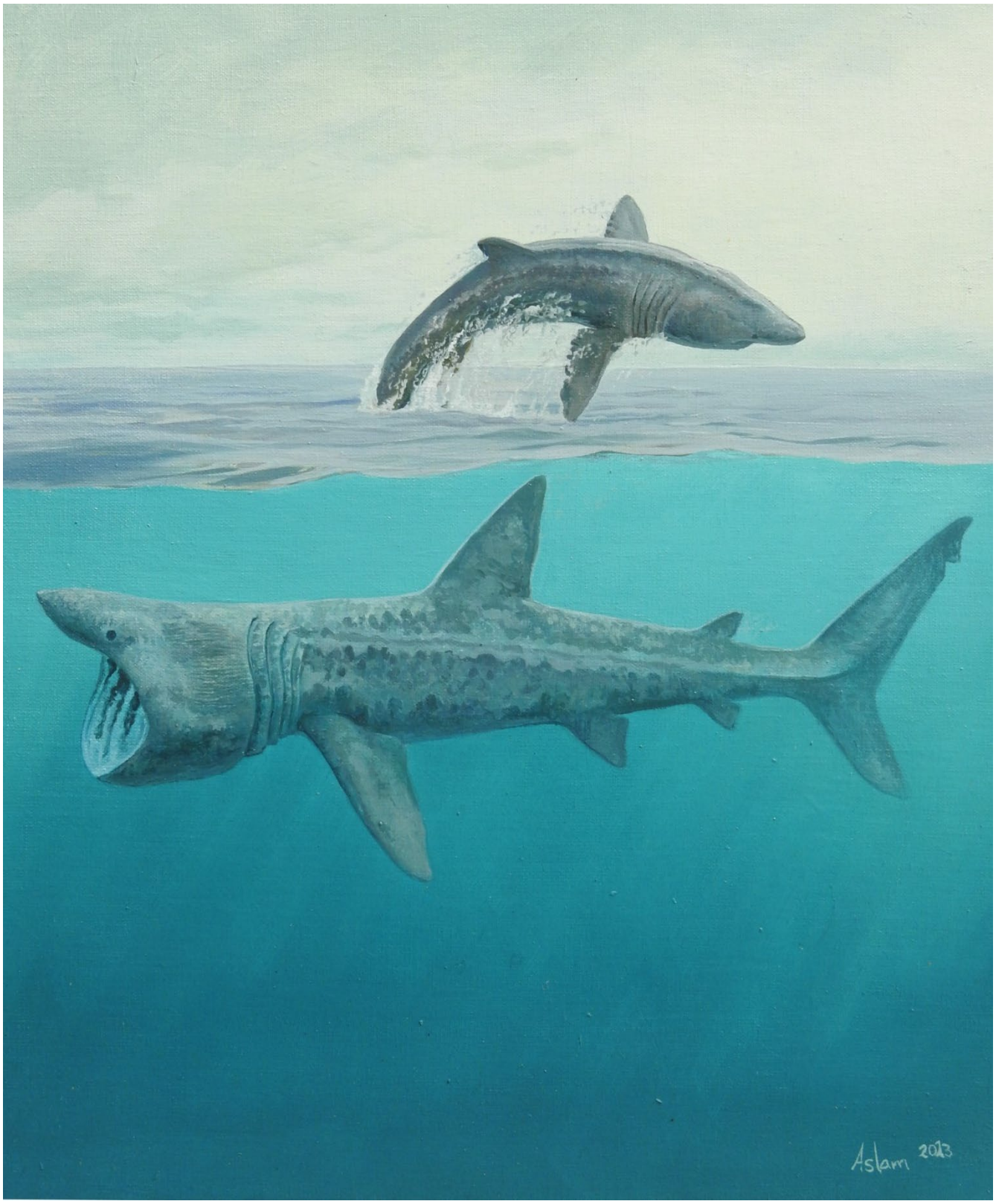
I am Peregrinus Hierusalemsis, and this is the story of my life.

In February 2010, while I was a bachelor's degree student at the University of Edinburgh in the United Kingdom, I attended a talk by a professor from the University of St. Andrews, Charles Paxton. He was interested in sea monsters, which was his topic. He said drunk sailors used to have encounters with sea monsters because in their drunkenness, due to having consumed ethanol (C_2H_6O), they mistook large animals for monstrous creatures.

Such animals included sharks (*Cetorhinus maximus* & *Rhincodon typus*); giant oarfish (*Regalecus glense*); whales (*Balaena mysticetus*, *Eubalaena* spp; *Eschrichtius robustus*, *Megaptera novaeangliae*, *Balaenoptera* spp. & *Physeter macrocephalus*); squids (*Architeuthis dux* & *Mesonychoteuthis hamiltoni*); and other species that, according to Paxton, were still unknown.

A friend of mine told me: "I do not believe what Paxton says, as I have been drunk plenty of times, and I have never seen a sea monster." My friend was, in fact, mistaken regarding the effects of alcohol. A small number of people suffer from an unusual symptom known as alcoholic hallucinosis. Such people see or hear objects or people that do not exist. It seems to me that my great-grandfather, Abraham, suffered from such symptoms. That is why he saw a path that did not exist and led him to his death. This is not something supernatural. It is a symptom of a psychiatric illness known as alcohol-induced psychosis. This is cured using antipsychotics, benzodiazepines, and alcohol abstinence. My grandfather, Tomás, thought that the hallucinations of his father were a trap of the Devil because such were the type of explanations accepted by his society. My uncle, Jorge Reyes Mejía, internalized the ideas of what is good and evil using such belief systems as the basis for such concepts. The world in which Abraham, his son Tomás, and his grandson Jorge Reyes Mejía lived and were educated was a world immersed in a religious worldview. That is why they were afraid of the Atlihuetzia rock paintings.

When the Spaniards conquered Mesoamerica and introduced their Christian Catholic religion, they created religious institutions such as monasteries and convents that monastics inhabited so they could convert their new subjects to their own religion. In Atlihuetzia, they built Convento de Santa María de la Concepción, a monastery that is the sanctuary dedicated to three saints known as the child martyrs of Tlaxcala. This is because one of these



***Cetorhinus maximus* (Gunnerus, 1765) (Lamniformes: Cetorhinidae)**

Illustration made by Aslam Narváez. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 852.**

martyrs, St. Cristobal of Tlaxcala, was born and lived in Atlihuetzia. The Franciscan monks of the Atlihuetzia monastery misrepresented the rock paintings of the Atlihuetzia cave to scare and control the Indigenous People of the Nahua ethnicity who worked for them. The Atlihuetzia rock paintings are simply the work of pre-Columbian Indigenous artists. They are not diabolical. The supposed demons or angels of the Devil are the images that archeologist Raziel Mora labeled as "unid. 1 i" and "unid. 1 k" in his paper titled "Las Pinturas Rupestres de Atlihuetzian, Tlaxcala" that was published in "Anales de Antropología" 11: 89–108 (1974).

According to the archeologist, these images depict persons, but I think they are jackrabbits (*Lepus callotis*), as the supposed horns in the rock painting look more like broad and long ears with a rounded apex. When a jackrabbit jumps, it has a similar appearance: an arched slender body with long and extended limbs. The image found between both beings ("unid. 1 j"), the one that Nahua oral tradition referred to as a goat (*Capra hircus*), is determined as a Central American red brocket (*Mazama temama*) by chronicler Mario Ríos Reyes (1992) in his paper titled: "Pinturas Rupestres de Tlaxcala (Amaxac de Guerrero)." This paper can be read in "Manuel Toussaint: su proyección en la historia del arte mexicano (Coloquio Internacional Extraordinario)."

However, brockets live in lowland tropical forests and in cloud forests of mountain slopes, not in the flat central Mexican highlands where the rock paintings are found. Considering where these paintings are found, I think such a creature is more likely a pronghorn (*Antilocapra americana*). In ancient times, pronghorns were living further south than their current distribution range. The southernmost place where archeologists have found pronghorn remains is Coxcatlán, Puebla. They used to live in xerophytic scrubs and grasslands of the highlands of Central Mexico. Several bones of these animals have been found in the archeological ruins of Teotihuacan, which are found 77 km away from Atlihuetzia. The surrounding ecosystem of Teotihuacan is like the one seen in Atlihuetzia. In Teotihuacan, pronghorns were often hunted by the local people. The animal in the painting also has a long snout like a pronghorn, not short like the one of a brocket.

The Christian sacred text is known as the "Bible." The first part of the "Bible," that is known as the "Tanakh" or the "Old Testament," was obtained from Jewish culture through cultural appropriation because Jesus, the founder of Christianity, was a Jew. Jewish people were one of the 12 tribes of Israel. The second part of the "Bible" is known as the "New Testament," which was not obtained by cultural appropriation. It is an original Christian

text. In "Leviticus," one of the books of the "Tanakh," there are wild genies that the 12 tribes of Israel should not worship. They are known as Se'irim. In English this means "male goats." That is because in ancient Mesopotamian and Egyptian religions, many genies are zoomorphic humans. In the same book, there is a description of an atonement ritual that the high priest of Israel performed on behalf of his people. Two male goats (*Capra hircus*) were involved in this ritual. By this I mean actual animals, not genies. The ritual involved sacrificing a goat to God YHWH so He would forgive the sins of His chosen people. The other goat was for the "azazel." This ritual involved freeing the goat in the wilderness so it could carry with it the sins of the people. In the "Book of Enoch," Azazel is an unclean spirit. Hence, the Jews of the time of the Second Temple of Jerusalem understood that an evil angel of the desert took away the sins of the people inside the goat.

The parable of the sheep and the goats from the "Gospel of Matthew," one of the books of the biblical "New Testament," compares the righteous with the sheep and the sinners with the goats. The sheep to the right will live eternally and happily in Paradise (Gan Eden). The goats to the left will be tortured in Hell (Tártaros) together with the Devil and his angels. This Christian parable perpetuates the association of goats with the angels of darkness. Due to this myth, the rock painting of Atlihuetzia was understood as something diabolical and scary, the goat being seen as a damned human soul led by evil angels toward Hell. At the same time, this exegesis achieved one of the evangelist agendas of the Catholic counter-reformation. Such agenda was using art to educate the Indigenous new converts in the Catholic faith.

During my lifetime, an ideological transition was happening in Mexican society between the medieval Judeo-Christian ideology of my ancestors and the modern materialistic ideology where politics have substituted God. Good Friday is when people remember the death of Jesus, the founder of Christianity, who is claimed to be divine. When I was a child, on Good Fridays, no one worked or made loud noises to pay their respects to the death of the charismatic prophet. On Good Friday, the 2nd of April 2021, there was a political rally in Mexico City, Mexico, that emphasized the hegemonic ideological agenda of the government. That is something that would have been considered a religious transgression during my childhood, something that no one would have dared to do. Such an event showed the cultural change that happened during my lifetime.

The Spanish conquistadors introduced the medieval Judeo-Christian ideology of my ancestors in the 16th century. In such ideology, ethics are based on the "Bible" and the philosophers from the classical antiquity

and the Middle Ages. The modern materialistic ideology where politics have substituted God is based on fashionable ideas from sociology and political theory. It also comes from the normativity that emanates from psychological research and self-help books. During my lifetime, people freed themselves from an intellectual cage made up of the metaphysics of institutional religion to be imprisoned in a new intellectual cage made up of political ideology. Like the rest of society, I was transferred from one cage to another. However, I noticed something that most people did not notice. I became aware that both ideologies were mere prisons and not the truth. I knew that truth can only be searched individually by seekers through their own efforts. No ideology a group of people shares can lead you to the truth. Indeed, as philosopher Louis Althusser said, all political ideology is inherently false. Mechanisms to maintain the leaders' belief system always distort reality.

You can read about this in Althusser's essay titled "Idéologie et Appareils Idéologiques d'État. (Notes pour une recherche)." It was published in "La Pensée" 151: 3–38 (1970).

My life is not only the story of such social change. My life is also the story of my discipleship with my philosophy teachers. That is the most important part. While living during a time of complex social and ideological changes, I became acquainted with certain persons who guided me through life by showing me a stable way of living that was not modified continuously due to political campaigns or the ideological fads of most people. This solid way of life was based on critical thinking, wisdom, and mysticism.

After finishing my bachelor's degree in biology at the University of Edinburgh, I decided to pursue a master's degree in biotechnology at Uppsala Universitet, Sweden. At that time, I had a teacher who was a philosopher, my spiritual master, and my guide. She was not a schoolteacher or a university professor. She chose me to be her disciple when she saw I needed help. She knew the help I needed was learning to acquire wisdom. She did not teach me to get money from me, as I never paid anything to her for her lessons. She did that out of love...

Her name is Jana, and she is filled with divine light, refulgent, and radiant in every possible way. In September 2010, when I started my studies at the Uppsala Universitet at 25 years old, she was 26 years old. While in Uppsala, I told Jana by telephone that I believed in case of her death, she would not disappear from this world, as there was a part of her that lived within me. The disciple desires to become the same type of person as the individual who taught the right way of living life. That is why I strived to have Jana within me.

Jana had perfect health; there was no reason to think she could die in a few years. In fact,

she is still alive and healthy. What I wanted her to know, however, and she understood it well, was that I was developing an inner Jana. Through that spiritual development, I would obtain her greatness and power. Such inner Jana is the gnosis (knowledge) derived from her teachings.

Some years before meeting Jana, I had a judicious philosophy teacher. His name was Emilio. He was my teacher when we were both teenagers and lived in Mexico City. At the beginning of 2014, when I was 29 years old, I made a trip through New Zealand. When I arrived in Christchurch, South Island, New Zealand, I was surprised to see several buildings downtown in ruins. Even the huge cathedral was destroyed! All such buildings were destroyed by the earthquake on Tuesday the 22nd of February 2011, whose epicenter was in Christchurch. While I was sleeping during the early morning in a Christchurch hotel, something peculiar happened.

In the middle of the darkness of the night, there was a monster in my bed that wanted to attack me. I started to hit it with my fists using all my strength. Then I listened to a voice that said, "Do you notice something?" It was Emilio who was standing inside the bedroom. I answered to him: "What would I need to notice?" The teacher told me: "That you are hitting a mere pillow." I told him: "You are right!" At that time, it was clear the monster was not truly a monster but only a pillow. The teacher said: "Sometimes the events that happen in this life resemble things that are not truly what they are." I told him: "I did not notice that this was, in fact, a pillow." The teacher told me: "It is not, in fact, a pillow because it does not exist, as this is a dream." I immediately woke up. There was neither a monster nor my teacher in the bedroom...

The next night, I dreamed of seeing my teacher, Jana, in front of me. She was smiling and extending her hand so I could hold it. I held her hand, and we went for a walk. She was walking in front of me while we were holding hands. We walked through a beautiful garden full of colorful flowers, beautiful green trees, and streams. The weather was sunny with a blue sky. While in such a place, I felt extreme happiness and immense inner peace...

On the surface, such dreams were unimportant and there would not be a reason to talk about them. However, they were important to me. The meaning they displayed was that I could interiorize my teachers. Now, they fully lived within me. In that way, I fulfilled what I told Jana when I spoke to her by telephone in Uppsala.

Now, she was inside of me. Nevertheless, the best is not only keeping them inside my mind, in my memories, in my actions, and in my way of thinking, but writing down their teachings to convert them to laws so they can be a genuine guide for living.

My aim for writing this book is to talk about the teachings of my philosopher teachers, who introduced me to mysticism. I will use this autobiographical text to write down their laws and avoid forgetting them. At the same time, this book has didactical ends. In "The Life of Reason," author George Santayana (1905) wrote: "Those who cannot remember the past are condemned to repeat it." In this book, the most important events of my life are written. They are full of teachings for me, so it was so important to write them down.

Finally, this is something like a photo album, but with words instead of photos. It can allow me to remember the past and its people. It includes the years 1984–2014, the time of the teachings of my mystical teachers. This book can have the same function as the "Sibylline Books" that were kept in ancient Rome to be studied during times of crisis. The mere fact of reading my teachers' teachings can make me feel better in difficult times. In some cases, their sayings can be used to make important decisions.

In this book, science is always stated correctly. It is never mangled to support spiritual beliefs. I consider spirituality to be a subjective individual experience, not a model to explain natural phenomena. I am neither an anti-pseudoscience nor anti-theist activist attempting to misuse science to criticize the belief in any Deity. Therefore, in this book, I write about the mystical experiences and adventures I have had, which many people could consider irrational. Still, I never mix them up with science. I also write about science because I have worked on several scientific projects, and it is part of my life.

I think that both rationality and irrationality are parts of the life of every modern human being. We all live with and employ them while thinking about life, society, and the Universe, even if we may scorn part of that continuum between rationality and irrationality. Irrationality is part of being human. Attempting to reject irrationality is as strange as when the Graeco-Roman Stoics wanted to reject passionate emotions or when Coptic monks wanted to reject sexuality. As passionate emotions and sexuality, irrationality is also part of the human condition. I consider that the truths of pure mathematics are the only genuine truths that exist. I acknowledge that the usefulness of the equations obtained by means of empirical experiments shows us that the natural sciences have suitable inductive methods to attempt to describe and predict nature. I agree with philosopher Jacques Derrida in believing that literary texts are subjective, but not in his view that other forms of knowledge are equally subjective. As this book is a literary text, you may agree or disagree with it as much as you want. However, it is how I see life.

You can read Derrida's view in his essay "La Différance" in "Theorie d'Ensemble" (1968).

Throughout this book, the reader will find numbers such as the following: 41.03465763928876, -87.42424551848612. These numbers are geographical coordinates that are used to find important places.

In this book, there are no zodiac signs. Astrological references are based on real-life constellations where the Sun, Moon, and the planets can be seen in a day without clouds with the naked eye or with the use of a telescope (please see Appendix B to know the difference between a zodiac sign and a zodiac constellation).

In this book, there are several scientific names of organisms. These names are invented by researchers. For example, Linnaeus named a medicinal plant *Hippocratea volubilis*. It was named after the ancient physician Hippocrates. It was published in "Species Plantarum" (1753). In a scientific name like "*Hippocratea volubilis*," the word "*Hippocratea*" is the genus, and the word "*volubilis*" is the specific name. I will now state what these Aristotelian categories mean in biology: The species exists or formerly existed. It is a group of organisms that somewhat look like each other, that have a common evolutionary history, and that have genomes that share an extremely high percentage of similarity. The genus is a category invented by humans to group species that have a common ancestor and are morphologically similar. An explanation regarding more particularities of scientific names is found in the glossary.

You can see a classification of all non-bacterial cellular organisms in Appendix I.

This text was not written with artificial intelligence, only with human intelligence. It was not written by ghostwriters, either. I wrote all the words, the author, the person who lived these life experiences. The omics illustration (figure 3) and the emojis are examples of digital art made with human creativity without the use of artificial intelligence. All the other illustrations in this book are examples of handmade traditional art made without the use of artificial intelligence. The original art for such illustrations is not digital. They are pieces of art painted on paper or canvas.

Using traditional art ensures that the original images are not dependent on specific software that might be unavailable in the future in case this book is published again; moreover, by using mostly traditional art, limiting myself to using few works of digital art, and not using any artificial intelligence, I want to preserve what philosopher Walter Benjamin referred to as "the aura" of the art. By this, I mean its originality, as it is not produced mechanically or mass-produced.

You can read this in the essay by Benjamin (1936) titled “L’œuvre d’art à l’époque de sa reproduction mécanisée” in “Zeitschrift für Sozialforschung” 5(1): 40–68.

If you want to read this book for fun, read it from here to Appendix F, as Appendix G is a university dissertation, Appendix H is an academic research paper, and Appendix I is a scientific classification of organisms. These texts may be too technical or not relevant for the reader. Appendices G, H, and I do not need to be read in any special way; they are not magical.

This book is free. You do not need to pay for it.

I am not planning to sell this book. If you find a similar book, or a “companion book” or “workbook” for my book supposedly written by me, it is not me who wrote it, it is someone impersonating me.

In this book, I accept both the “International Code of Nomenclature of Prokaryotes” (ICNP) and the “Code of Nomenclature of Prokaryotes Described from Sequence Data” (SeqCode). I endorse the effort of the editors of the SeqCode to improve microbial systematics.

I decided to print this work as a hardback book because hackers and malware cannot harm printed books kept in old libraries. Moreover, no special software or hardware is needed to read them. Furthermore, it can be read without any electricity or batteries.

If you find an illustration intriguing, you can read its label in the List of Illustrations at the end of the book. It will provide you with information about the meaning of the illustration. The page number of the label is always written below each illustration.

The only remaining task of this introduction is to bless the reader before starting this journey through time. I shall bless my readers as I was blessed by my friend Daniel Mastretta: “May you have luck in your journeys, if they can be known as that.”

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

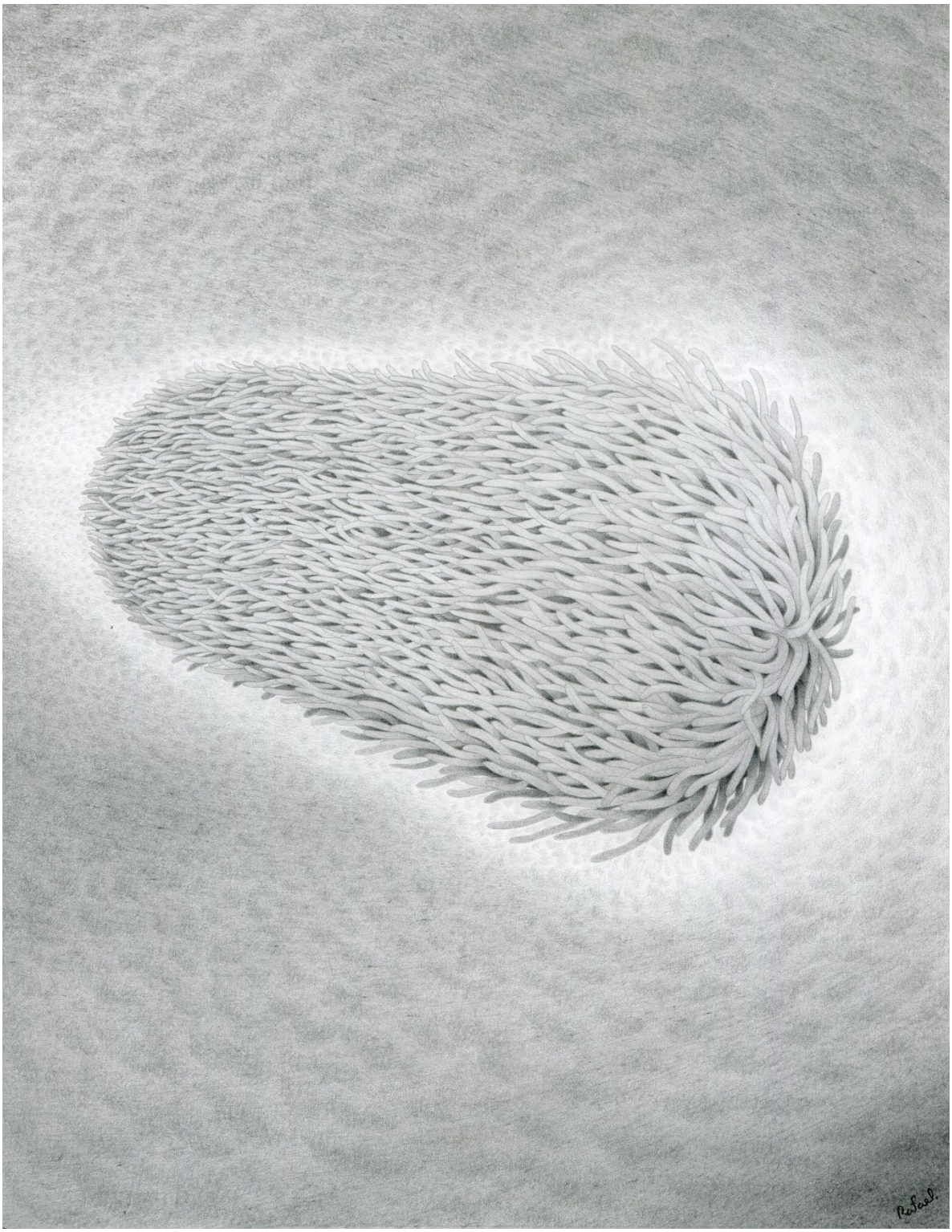
Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

Part One

The Doctrine of Enríquez, the Lawgiver

"To prevent them from getting sick, what should be done is to apply preventive medicine, not waiting until they have the disease to try to do something."

—Enríquez, the lawgiver. He was discussing an illness caused by a parasite in his university dissertation.

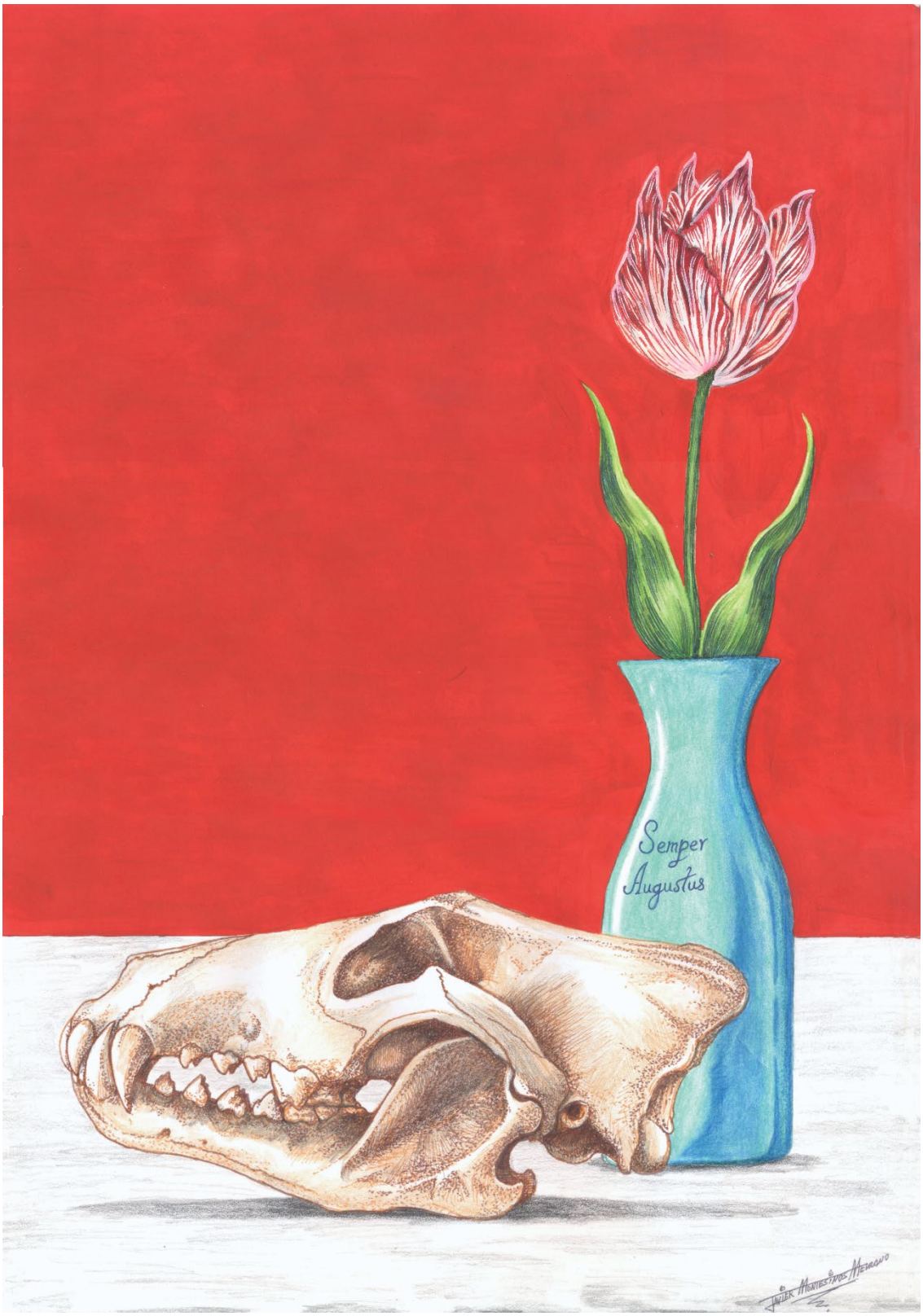


***Ichthyophthirius multifiliis* Fouquet, 1876 (Hymenostomatida: Ichthyophthiriidae)**

Illustration made by Rafael Calderón. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 853.**

Portrait of Enríquez, the lawgiver

Illustration made by Līga Kļaviņa-Raiska. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 853.**



***Canis familiaris* Linnaeus, 1758 (Carnivora: Canidae)**

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CHAPTER 1. *OPUNTIA STREPTACANTHA*

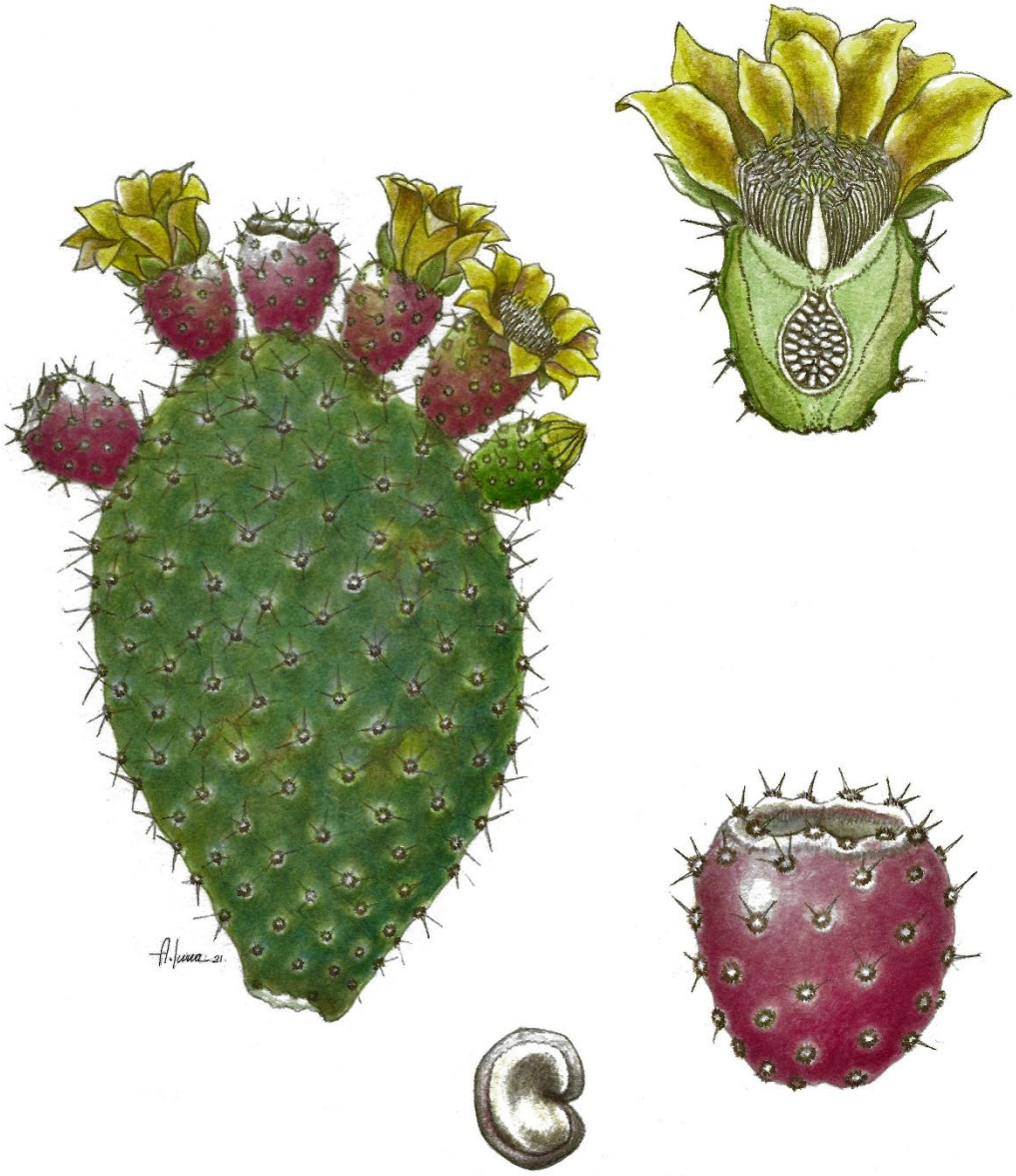
I will briefly outline the history of Mexico, my country. It is important to know it to understand my life.

Before the arrival of the Spaniards, ancient Mesoamerica was a region with plenty of different cultures. There were plenty of independent city-states and nation-states.

According to an old legend, once upon a time, there were plenty of Uto-Aztecan tribes that left Chicomoztoc and Aztlan to look for new places to live. Some of these tribes were the Aztecs, the Teochichimecs, the Xochimilcas, the Tlahuicas, the Tepanecs, the Chalcas, and the Acolhuas. The Aztecs were led by a very powerful nagual woman named Malinalxochitl. She was malicious. A nagual ("uay" in Yucatec Maya) is a magical shapeshifter that can willfully transform into a non-human animal. They have great malediction powers so that they can cause illnesses and accidents. Malinalxochitl claimed that she was the sister of God Huitzilopochtli. The Deity commanded some of His followers through His prophet that they should run away from that evil woman while she was sleeping. In that way, they were free from her oppression.

Finally, the Aztecs arrived at Lake Texcoco. They decided to live there because there were other residents that also came from Chicomoztoc who spoke the same language, Nahuatl. Malinalxochitl was angry that the Aztecs stopped following her orders. Thus, she sent her son Copil to slander the Aztecs, so the other city-states of Lake Texcoco would fight a war against them and banish them. The Aztecs killed Copil as he was a gossip. They threw his heart to a rock that was in a spring on an island in the middle of Lake Texcoco. Such a place belonged to the kings of Azcapotzalco. A prickly pear cactus (*Opuntia streptacantha*) grew out from Copil's heart. The cactus was tall and majestic. God Huitzilopochtli told the Aztecs through His prophet that they should build a city in the place where they would find a golden eagle (*Aquila chrysaetos*) standing over a prickly pear cactus. When the Aztecs returned to the place where they threw Copil's heart, they saw the apparition that was promised by their Deity, so they built Mexico City in such a place. According to a legend, that place is Plaza del Aguilita, a square in the Barrio de la Merced, Mexico City, Mexico. The Aztecs started to make military alliances and wars of conquest, creating a mighty empire.

After Christopher Columbus arrived in the West Indies with the financial support of Spain, the Spaniards started to explore and conquer all the lands that they invaded in



***Opuntia streptacantha* Lemaire, 1839 (Caryophyllales: Cactaceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 853.**

the New World. The northernmost Spanish colony of the New World was known as New Spain. It included all the region that was formerly inhabited by all the Mesoamerican cultures that were sacked, destroyed, and enslaved by the Spaniards. Mexico City was the capital city of the Aztec Empire. After Spanish captain Hernán Cortés conquered it, it became the capital city of the Viceroyalty of New Spain. Due to epidemic outbreaks of diseases introduced by the Spaniards, such as smallpox (an illness caused by the *Variola virus*), most Indigenous Peoples died.

The Spaniards then bought Black African slaves so they could substitute the Indigenous population and work for them as farmers, miners, builders, and laborers. New Spanish culture was a mixture of Mesoamerican, European, and Sub-Saharan African culture. The most important religion of the Spanish Empire was Catholicism. The Spanish conquistadors introduced it to and imposed it violently on all their New World colonies. The English government stole a lot of gold and riches from the Spanish Empire by hiring pirates that attacked Spanish ships and harbors. That is why a wall was built to protect the Puerto de Campeche, a port in New Spain. A famous Catholic nun who was a poet lived in New Spain. Her name was Sister Juana Inés de la Cruz. Some New Spanish Indigenous leaders, such as Popé and Jacinto Canek, started independence wars to free their lands from Spanish control, but were unsuccessful.

Not only Spain was a colonial power, but also other European countries invaded and conquered many Indigenous kingdoms. Europe became the ruler of plenty of lands.

In ancient Greek religion, nine goddesses of the arts were known as the muses. I have dedicated this book to them. Sappho was such a good poet that philosopher Plato thought she should be considered the tenth muse. In the Middle Ages, it was considered that nine ancient warriors should be imitated by every knight; they were known as the nine worthies. Following the example of Plato, I think that Napoleon Bonaparte, the emperor of the French, was such a mighty general that he should be considered the tenth worthy!

Napoleon invaded Spain and imposed his brother as ruler. The Napoleonic laws imposed in Spain were against the interests of the Catholic Church. The Church retaliated by starting armed conflicts in the Spanish colonies. In New Spain, Miguel Hidalgo, a Catholic priest, started the war. According to an old legend, when Hidalgo arrived in Guanajuato City, intendant Riaño locked himself together with the richest persons of the city and plenty of food inside Alhóndiga de Granaditas, a building that snipers protected. A man from Hidalgo's army, nicknamed El Pípila, walked toward the door of the Alhóndiga

with a heavy flat stone placed on his back, protecting him from the bullets of the snipers. When he arrived at the door, he set it on fire. Hidalgo was then able to win the battle of Guanajuato City. Later, Hidalgo was killed, but the war was continued by his disciple, a priest named José María Morelos. He fought for the independence of New Spain from Spain. According to an old legend, the Spanish army sieged the insurgent troops in Cuautla. The Spanish were about to win such a battle when a 12-year-old boy known as "El Niño Artillero" shot a cannon that scared the Spanish army. When Spain was freed from Napoleon's control, a new constitution, the "Constitución de Cádiz" (1812), was enacted. As this constitution was also against the agenda of the rich New Spanish Criollo elites, New Spain became an independent nation-state known as the First Mexican Empire. This empire comprised the countries now known as Mexico, Guatemala, Belize, El Salvador, Honduras, Nicaragua, and Costa Rica.

Agustín de Iturbide was the first Mexican emperor. Afterward, due to a coup d'état, the First Mexican Empire was abolished. The empire was split into two independent republics: Mexico and the Federal Republic of Central America (this last nation-state included the current Central American countries that were part of the First Mexican Empire).

From that moment onwards, Mexico became a presidential democracy. Its first president was an independence war hero who was nicknamed Guadalupe Victoria. During the first half of the 19th century, political and social instability occurred. At that time, when Antonio López de Santa Anna was the president of Mexico, the United States of America declared war on Mexico. According to an old legend, when the American troops occupied the Mexican military academy in the Castillo de Chapultepec, a fortress in Mexico City, some students fought against the foreign army. The legend states that one of them wrapped himself in the Mexican flag and killed himself by jumping from the roof of the military academy to protect the Mexican flag from being seized by Americans.

After the end of the Mexican-American War, the Americans were victorious, so they annexed all the states of the north of Mexico to their country. Such territory is now part of Texas, Oklahoma, Kansas, Colorado, New Mexico, Arizona, Utah, Wyoming, Nevada, and California. The Americans invaded the land of the Indigenous tribes that lived in such regions. They seized the lands of the natives and colonized them. Afterward, Benito Juárez became the president of Mexico. During his reign, Mexico fought a war against France. The most important battle of this war was the Battle of Puebla de los Ángeles on Monday, the 5th of May 1862. Every year, this battle is

remembered in the Cinco de Mayo celebration. The French invasion led to an attempt to establish a Second Mexican Empire. Maximilian von Habsburg-Lothringen headed this empire. Benito Juárez was able to dismantle this empire with the aid of the American government. This allowed democracy to be reinstated in Mexico. Juárez also enacted the laws known as the "Leyes de Reforma" that radically changed Mexico. These laws gave more opportunities for economic and cultural progress to Mexican citizens. The Catholic Church supported the political enemies of Juárez and oppressed the poor, so Mexico terminated diplomatic relations with the Church.

Some years later, Porfirio Díaz became the president of Mexico. He was a hero in the war against France. While president, he was a dictator who enslaved the poor and kept all his presidential power through reelection during plenty of terms. To stop this, the political opposition candidate, Francisco Madero, started a war known as the Mexican Revolution.

In this war, the generals Pancho Villa and Emiliano Zapata were highly famous. When the revolution apparently triumphed, a military officer named Victoriano Huerta seized the presidency by overthrowing the government, but he was overthrown by the revolution fighters. When Venustiano Carranza became president, he enacted a new constitution, the "Constitución Política de México" (1917). This constitution included some revolutionary ideology. Nevertheless, Carranza was also a president who ignored the poor's plight. The ideology of the revolution was based on providing more equality to the poor. Plenty of national heroes such as Villa and Zapata fought for that. Carranza sent assassins to kill Zapata.

Between 1918 and 1920, there was a pandemic outbreak of influenza that was known as the Spanish flu. It was caused by an *Influenza A virus* subtype H1N1 and killed plenty of people. The revolution was followed by the Cristero War. The Catholic Church organized this conflict because President Plutarco Elías Calles attempted to set boundaries for the power of the Church. Plutarco Elías Calles founded a political party known as Partido Revolucionario Institucional (PRI). For several decades, this party controlled the chambers of congress. During this time, all presidents were members of this party. During the government of President Lázaro Cárdenas, there was an educational reform that was against Catholic values, so there was a Second Cristero War. In 20th-century Spain, there were plenty of communist and socialist political movements. Francisco Franco became the ruler of Spain after the Spanish Civil War. As he was a fascist, he wanted to get rid of communists and socialists, so he exiled such people. The Mexican government allowed all Spanish

political refugees to live in Mexico. Furthermore, it provided them more political and social opportunities than Mexican citizens.

In Europe, an evil fascist named Adolf Hitler took revenge because of the punishments imposed on Germany after losing World War I. This man started a new world war, World War II. Germany and its totalitarian allies declared war against the other most powerful countries. During World War II, the government of the United States of America supported the diaspora of Mexican farmers in its country so they could maintain the supply of food and support the economy during wartime. Nazi Germany, Italy, and Japan were defeated in the war.

Since the beginning of European colonialism, Europe was the most powerful geopolitical region. As a result of World War II, Europe was ruined. Therefore, the United States of America and the Union of Soviet Socialist Republics became the most powerful countries.

Peace did not return to the world, as the United States of America and the Union of Soviet Socialist Republics started a conflict known as the Cold War. As a result, a nuclear race developed between both countries. The Mexican government sided with the capitalist government of the United States of America. So, it started to fight Soviet spies who attempted to indoctrinate the Mexican youth with communist ideas. This ideology seduced plenty of young people because they disliked the social and economic inequality of Mexico and wanted a solution to such issues. The Cold War generated a paranoid environment, so the Mexican government killed plenty of young people. Some of these were communists who wanted to overthrow the government, but others were mere activists who wanted to improve the life standards for average Mexicans. The most infamous massacre of this time happened on Wednesday, the 2nd of October 1968. In 1973, Augusto Pinochet led a coup d'état in Chile. The socialist exiles arrived in Mexico and revitalized Mexican socialism.

Marxist socialism is a 19th-century political ideology promoting the establishment of a planned economy that would be controlled by a totalitarian government whose aim would be to distribute money and property in an egalitarian fashion. Karl Marx, the man who developed these ideas, thought that socialism aims to achieve communism. Communism would be reached when a nation-state would not have private property, government, and social classes.

The Marxist communist utopia is based on the "Epistles of Anacharsis" from ancient Greece, in the ideas argued by St. Thomas More in "Utopia" (1516), and in the ideas of Cesare Beccaria outlined in "Dei Delitti e delle Pene" (1764).

The modern territory of Mexico is found in the boundary of the Nearctic and the Neotropical realms. Thus, there are temperate forests and deserts in the north, as well as tropical rainforests and tropical deciduous forests in the southeast. Furthermore, the landscape of Mexico is full of mountains, valleys, and basins that create geographical barriers to the flow of genes in the populations of organisms. Therefore, there is a lot of biodiversity. As part of Mexico is found in the tropical part of the world, every year, there are hurricanes that cause damage in the lowland cities and towns.

When I was born, Mexico was a presidential democracy. The most widely spoken language was Spanish. There was no national sovereignty, as the most critical decisions for ruling Mexico did not happen in Mexico. The bills passed by the congress were based on international laws from the United Nations, the fashionable political ideology in the United States of America, and the bills passed by the congress of the United States of America. The only internal sources of Mexican laws were the political groups with a lot of economic power and non-governmental organizations. Average Mexican citizens did not have any control over the laws of Mexico.

Due to the social inequality in Mexico, there was a diaspora of Mexicans in the United States of America. They sent remittances to poor Mexican families. Thus, there was a syncretism between Mexican and American culture, and the second most spoken language was English. In some villages that were far away from large cities, there were people who did not speak Spanish but were quite fluent in English, as many of them worked illegally in the United States of America. These people also spoke their native Indigenous languages. The Mexican economy was based on the production of petroleum. This was the primary source of stability for the Mexican peso (MXP), the national currency.

The favorite sport of Mexicans was soccer/football. Its success was due to helping people with low self-esteem feel like champions every time the team they supported won. Professional wrestling was also important in Mexico. The most beloved wrestlers were the masked ones, such as El Santo and Blue Demon. The government banned several goods and services with high demand, so criminal organizations were involved in these businesses. Such businesses included trafficking drugs, weapons, and slaves. Criminal organizations had paramilitary armies with plenty of weapons. The most popular religion in Mexico was Catholicism. Catholicism ruled the ethics and traditions of most Mexican families. This is the end of my essay regarding Mexican history. In the following pages of this chapter, I will outline the Catholic worldview, as it is essential to understand my life.

Allegory of the Americas

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The Catholic Church is one of several Christian denominations. It is an ancient religion from the Mediterranean Basin. Its syncretic origin is found in the most ancient Christian churches. The following narrative does not necessarily include real historical facts, but it is the sacred story that Catholics believe. According to Christianity, YHWH, the God that created the Universe, befriended a man from ancient Mesopotamia that He named Abraham. The God promised greatness to this man and to his offspring. YHWH made a covenant with some descendants of Abraham through prophet Moses on Mount Sinai (Mount Horeb) after freeing the descendants of Abraham from slavery in Pharaonic Egypt. The covenant involved that they would become a nation of chosen saints of God that would conscientiously follow the Law ("Torah" or "Pentateuch") sent to them by the Deity through Moses. Aaron, Moses's brother, became the first high priest (kohen gadol) of the God of Abraham. These tribes of descendants of Abraham populated the land of the Canaanites. Such land was promised to them by their Deity. All the tribes got lands except the Levites, who were consecrated as priests. As they owned no land, they should get 10% of the agricultural production from the other tribes, the so-called tithe.

To protect their lands from Philistine invaders, the tribes of Israel asked their Deity for a king so he could lead the army in wars against the Philistines. Their Deity commanded prophet Samuel to anoint Saul with olive (*Olea europaea*) oil to grant him the title of king. The Deity stopped helping Saul because he did not follow His orders when the Deity commanded Saul to kill Agag, king of the Amalekites, together with his best quality cows (*Bos taurus*) and sheep (*Ovis aries*). As the Deity was not supporting Saul, his enemies defeated him in battle and Saul killed himself. The Deity chose David to be anointed as king of Israel by Samuel. The son of David was Solomon.

According to legend, Solomon could control the genies so they could grant him wishes. He also understood the languages of all animal species and had a flying carpet. He could perform all these miraculous actions with the wisdom that the Deity granted him. King Solomon commissioned the construction of the First Temple of Jerusalem (Beit HaMikdash). The temple kept the Ark of the Covenant (Aron HaBrit) containing the Tablets of the Law (Luhot HaBrit) that had inscribed the legal Decalogue (Aseret HaDibrot) that Moses got from his Deity. The temple also contained all the holy objects from the Tabernacle (Mishkan), the itinerant sanctuary where the Ark of the Covenant was kept before the temple was built. Rehoboam, the son of Solomon, faced a revolt led by Jeroboam that split his kingdom into two kingdoms.

Jeroboam became the king of Israel in the north, and Rehoboam the king of Judah in the south. The people from the Kingdom of Judah were known as the Jews. Jeroboam I built his own temple in Bethel. Jewish prophets considered that Jeroboam I and his descendants were illegitimate kings, as they were not descendants of David, the king chosen by the Deity to reign. The Jewish prophets foretold that an anointed descendant of King David would eventually unify both kingdoms into one. This anointed king would lead the 12 tribes of Israel to their highest possible empowerment. He would be known as the Prince of Peace and rule over the nations. This king of the prophecy was known in Hebrew as the "Mashiach," which means "anointed." The kings of Israel and Judah worshipped the Deities of the Canaanite pantheon, practiced idolatry, and forgot the God of Abraham that freed them from slavery in Egypt. By performing these actions, they went against the commandments of the "Torah" that can be read in "Exodus." Therefore, their Deity punished them by destroying their kingdoms. King Nebuchadnezzar II of Babylon destroyed the First Temple of Jerusalem. The Jews were exiled to Babylon, where they became slaves.

Persian King Cyrus the Great conquered Babylon and allowed the Jews to return to their homeland, where they built the Second Temple of Jerusalem (Beit HaMikdash HaSheni). The Achaemenid Persian Empire fell, and Judea became part of the empire of King Alexander the Great of Macedon. The empire was split, and Judea became part of the Seleucid Empire. There was a massive Jewish revolt due to the injustices of Seleucid laws. This revolt was initiated by Mattathias, a Levite priest. His son, Judas Maccabeus, recovered the Second Temple of Jerusalem from the Seleucid army. This revolt is known as the Maccabean Revolt after him. As a result of this war, the Jews achieved independence. Their independence and sovereignty ended when the Romans conquered them.

All these stories are part of the Jewish religion. Christians also believe in other stories. According to Christians, God YHWH wanted to make a second covenant. This time, it was a covenant with all humanity, not just with Jews, Levites, Benjaminites, and Samaritans. In Hebrew, the word "anointed" is translated as "mashiach." That is the origin of the English word "Messiah." In Greek, the word "anointed" is translated as "christos." That is the origin of the English word "Christ." According to Christians, the Messiah, or Christ, foretold by the Jewish prophets of the time of the First Temple of Jerusalem, was born as Jesus during the time of the Roman Empire. His mission was to preach the word of God YHWH to humankind.

Jesus gave teachings (gnosis) to his disciples. These teachings aimed to promote prosocial

values and allow believers to attain eternal life and divine salvation. Jesus chose as many apostles as the number of tribes of the ancient, unified Israel. Judas Iscariot, one of the apostles, betrayed Jesus and handed him to his enemy, the kohen gadol, whose name was Ben Caiphas. The kohen gadol thought that Jesus was a heretic Jew. Jesus was sent to be tried by Roman authorities. The Jewish people of Jerusalem who were led by the kohen gadol condemned him to die by crucifixion. He died, but it is claimed that afterward, he was miraculously resurrected. The disciples of Jesus taught his teachings to anyone that they could convert to their new religion. St. Paul the Apostle to the Gentiles, was a great philosopher who wrote down most of the Christian doctrine. I have now outlined the beliefs of the Christians.

The following narrative is actual history, not mythology. Catholic religion differs from other Christian denominations, and I shall describe it now. After stopping restricting Christian membership to Jews, pagans were baptized into this new faith. While this happened, Christian churches started mixing their beliefs and traditions with pagan Egyptian and Graeco-Roman religions. They also mixed their religion with secret mystery cults from exotic lands, such as the mysteries of Mithra, the angel of light in Zoroastrianism, and the mysteries of the Great Mother Cybele, the Goddess that is depicted riding a cart drawn by lions (*Panthera leo*). Christians adopted pagan mystery rituals to commemorate the mystery of the death and resurrection of Jesus. These rituals were totally different from Jewish rituals. Some of these hierophantic rituals involved praying in front of icons or sculptures and venerating relics. These were the most holy rituals of all pagan mysteries but absent in Judaism.

Christian apostolic churches developed at the same time as the Mandaean religion. This religion was founded by St. John the Baptist, the man who baptized Jesus. These two religions exchanged plenty of traditions and beliefs. Imperial Rome's government considered Christianity a criminal practice on more than one occasion. Thus, it punished Christians. A lot of Christians underwent martyrdom. Numerous Christians were happy to become martyrs, as they were sharing the same death as Jesus. In the ancient city of Rome, there were several apostolic Christian churches led by different independent bishops. It was claimed that St. Peter, one of the most distinguished original 12 apostles of Jesus, founded them. One such church achieved more economic and political power than the others. This church is now known as the Catholic Church.

The Western Roman Empire fell due to financial problems, barbarian invasions, and the rise of Christianity. Due to these events, there was an important cultural decline. Now I shall state my hypothesis regarding why cultural decline happens in

civilizations. Unlike most historians, I do not think cultural decline is the result of immorality, superstition, and ignorance. Not even virtue, truth, science, and rationality can avoid cultural decline. After all, Christians at the time of the downfall of Rome claimed to be virtuous, truthful, philosophical, and logical. Cultural decline happens whenever there is a lack of diversity of ideas. At the beginning of the Roman Empire, there was a great diversity of ideas due to all the schools of ancient Greek thought and the religions of all the conquered peoples. This led the Romans to greatness. At the end of the Western Roman Empire, due to barbarian invasions and to Christianity, most intellectual discourse was limited to Germanic tribal folklore and supernatural Neoplatonism. Guys such as St. Ambrose, St. Augustine, and St. Jerome had a de facto monopoly over intellectual discourse. This lack of diversity of ideas necessarily led to cultural decline. Whenever the diversity of ideas and worldviews increases, mighty empires are created. Whenever the diversity of ideas and worldviews decreases, civilizations are destroyed. That is why we need to be suspicious of all political fads and fashions that massively change the minds of citizens and end up being metanarratives that are used to modify all culture and institutions.

In the following centuries, some of the most important Catholic thinkers such as Pope St. Gregory the Great and St. Thomas Aquinas allowed the practice of several pagan rituals and traditions by finding philosophical justifications for practicing them. There are no Catholic Levites. Even without Levites, the Catholic Church did not abandon the Jewish tradition of paying tithes. In the absence of Catholic Levites, tithes were paid to the Church. In its first stage, the Catholic religion was a Jewish mystery cult for initiates. In its second stage, it was the official religion of the Roman Empire. In its third stage, it became the most powerful institution of medieval Europe.

Prophet Muhammad was the founder of Islam in medieval Arabia. Islam, the religion of Muslims, is a syncretic religion that includes Jewish, Christian, and pagan pre-Islamic Arabian traditions. It involves the practice of monotheism and rejecting idolatry, as in Judaism. It also involves attempting to convert large amounts of people to Islam, as Christians also attempt to do the same with Christianity. The God of Islam is YHWH, the same Deity that is worshipped in Judaism and Christianity. Muslims do not refer to their Deity with the tetragrammaton (the letters YHWH). Usually, they call Him Allah. All religions that worship this Deity as creator and almighty being are known as Abrahamic religions because of their legendary founder.

During the Middle Ages, the Catholic Church was split from the Christian Orthodox Church due to political and

economic reasons. These conflicts created different doctrines. One such source of conflict was that the pope of Rome, the head of the Catholic Church, claimed to be above all Christian bishops. Such a claim that involved superiority in authority implied that he needed to have political and economic control over them. In the following centuries, the popes of Rome lived as princes. They had immense wealth, gold, and jewels. They dwelt in palaces that were full of splendor and grandeur.

Islam, the new religion, grew so much in power and territory that soon there were powerful Muslim empires. The increase in the territory of these empires threatened the hegemony of Christian kingdoms and institutions, including the Catholic Church. The reaction of the Church was to declare war on Muslims. These wars are known as the Crusades. They were European military expeditions that aimed to attack the Holy Land that was under Muslim control. As a result of the crusader ideology, Catholics also killed Jews and Christians of other denominations within Christian lands as they labeled them as heretics. During the Middle Ages, there was a pandemic outbreak of bubonic plague. It is a disease caused by a bacterium known as *Yersinia pestis.* This historical plague outbreak is known as the Black Death. It killed millions of people in Europe. The plague changed religion, making it macabre and obsessed with death.

During the Renaissance, merchants and entrepreneurs from what is now Italy started to develop a new form of Catholic culture that included an extreme admiration for the ancient Graeco-Roman civilization and a passionate interest in Muslim mathematics, science, and technology. The bourgeoisie became the new leading force of Catholic art and architecture.

Christians did not invent witches. People believed in them since ancient times. Ancient Mesopotamians wrote the "Maqlû" text to protect people harmed by witches. During classical antiquity, there was even a Goddess of witchcraft. However, witches were never as important in politics as they were during the late Middle Ages and the Renaissance. During the Witch Craze, many people underwent martyrdom because Christians claimed that they were heretics or practitioners of witchcraft. Witchcraft was defined as the heretic art of harming society using supernatural powers. In Europe, other types of people were also labeled as witches. They were people who supposedly practiced religious rituals that were not sanctioned by Christians. According to legends, these rituals involved using flying ointments (**page 843**). Some believed that witches flew using a salve made of human tissues from dead children. Others thought they were just made of plants. Some modern people prefer to believe they used such recipes that include poisonous Solanaceae (*Atropa belladonna*, *Hyoscyamus niger*, or

Hyoscyamus albus). This allows them to explain the witches' flights as mere hallucinations. Among these people, some say witches also used drugs from toads (*Bufotes viridis*, *Epidalea calamita*, *Bufo bufo*, or *Bufo spinosus*).

Some modern people believe witches never used hallucinogenic drugs to get high at all. They say the pharmacological hypothesis is wrong and was a biased conclusion by scientifically minded Dr. Andrés Laguna to deny the superstitious claim that witches truly flew. These people do not claim witches flew but that such flights were just old wives' tales. Other people, especially younger ones, do believe witches were able to fly. They argue there was something supernatural going on, so witches truly flew without the need for any drugs. Plenty of modern people wish they could fly on a broomstick.

Laguna's hypothesis is the most popular one. It was first published in his book titled "Pedacio Dioscorides Anazarbeo, acerca de la materia medicinal y de los venenos mortiferos, traduzido de la lengua Griega, en la vulgar Castellana, & illustrado con claras y substantiales annotationes, y con las figuras de innumeras plantas exquisitas y raras" (1555).

My friend Gabrielė Indrišiūnaitė told me that on St. John the Baptist's Eve, girls in Lithuania gather flowers and inflorescences from several species in the countryside. They make a garland of them that they wear as a crown. This garland is supposed to have magical properties and is used in several rituals and magical spells. My friend, the utmost sweet Tove, told me that in Sweden on St. John the Baptist's Eve, girls gather flowers and inflorescences belonging to any random seven different species. They place them under their pillows to dream during nighttime about the guy that they will marry. These puerile spells might not seem related to witchcraft, but I read the oldest description of the ingredients of a flying ointment, and I was surprised at how related it was to these traditions, especially the Swedish one!

According to Johannes Hartlieb (1456) in "Buch Aller Verbotenen Kunst," the witches gather seven plants. Each one of them is gathered each day of the week. The flying ointment is made of them. This might seem unrelated, but we should not forget that some people believed witches had their visions while they were sleeping after applying the unguent. So, the seven species and the nightly magical visions while sleeping are shared by both the flying ointment narrative and the modern midsummer Swedish ritual. A difference is that one of Hartlieb's plants does not produce a flower because it is a fern (*Adiantum capillus-veneris*). Hartlieb's seven species are: *Adiantum capillus-veneris*, *Mercurialis annua*, *Anthyllis barba-jovis*, *Lunaria annua*, *Verbena officinalis*,

Calendula officinalis, and a secret plant that is kept concealed by him, so you do not attempt flying at home! I guess most people who imagine witches used recreational drugs think the secret species is a poisonous Solanaceae. I believe it is most likely a plant that is somewhat related to the God Saturn because all the other plants are related to the patron Deity of the day of the week when they are collected. Could it be the horsetail *Equisetum arvense*?

Spanish and Portuguese conquistadors introduced Catholicism as a compulsory religion in the places they conquered. They achieved this through war and torture. For them, conquest was a Christian duty to spread the gospel. They learned this from the Muslims, for whom jihad was a religious duty. During the late Middle Ages, most of Iberia was under Muslim control, so Catholic warriors who fought against jihadists learned that war was a religious principle. These Spanish and Portuguese Catholic warriors saw their conquests in foreign lands as a continuation of their Iberian struggle against Muslims. For them, their new overseas enemies were also enemies of the Catholic Church that they needed to vanquish to increase the Catholic lands. They worshipped St. James the Great, one of the original 12 apostles of Jesus, as a sword-wielding knight riding a war horse (*Equus caballus*). This was the symbol of their "Catholic jihad." What is now Mexico was conquered by these types of fighters.

Protestant Christians split themselves from Catholicism during the Renaissance. They wanted to return to the traditions of ancient Christianity, also rejecting idolatry and pagan rituals included in Catholicism. Luther was the first great leader of the Christian Reformation. The Lutherans became a powerful denomination in Northern Europe. Other early denominations of the Reformation that split from the Church of Rome were the Anabaptists and the Calvinists. St. Luke, in his book of the "Acts of the Apostles," suggests a utopian church where objects and properties are shared between Christians, and richness is distributed equally. St. Luke was clearly influenced by pagan Cynic philosophy and by the Jewish teachings of the prophets of the time of the First Temple of Jerusalem. Anabaptists were inspired by this to want to end the huge differences in money and political power between social classes. Calvinists, following St. Augustine, believed no one can be sure whether a person will be saved, as only God YHWH knows and decides that. Hence, they live a life of strict behavior. St. Augustine wrote this idea in his book titled "De Praedestinatione Sanctorum."

Catholics and Protestants fought each other for lands, money, and glory. These conflicts escalated until leading to the Thirty Years' War in Europe. French Calvinists were labeled as enemies by the ruling Catholic government. As a result of this intolerance,

the Calvinists developed ideas that involved equality between members of society that were a bit like those of the Anabaptists, except that they also wanted a form of government that was a bit like the ancient pagan Athenian democracy in allowing subjects to choose their authorities. They particularly wanted freedom of religion and a secular state that would not be biased against some churches.

The ideas of Calvinist theorists such as Philippe de Mornay created a new kind of political theory that eventually led to the Enlightenment ideas suggested by John Locke, who was also a Protestant Christian, although many of his views influenced deism. Enlightenment led to the French Revolution; whose ideas became ubiquitous after the Napoleonic Wars. American democracy was also based on Enlightenment values. In this way, Christianity created the secular world. The secular state eventually became more relevant than churches in Western culture, thus causing the decline in power and influence of Christian religion. By creating the secular world, Christianity disempowered Christianity. New discoveries in the natural sciences made educated people wary of biblical dogmas. However, in 20th-century Mexico, where the story of this book begins, the Catholic worldview still ruled, as most people were poorly educated but were highly religious. The same happened in most Latin American countries.

The sacred books of Catholicism are the Jewish "Tanakh," which was written in Hebrew, and the Christian "New Testament," written in Greek. When both are included in the same volume, such a book is known as the "Bible." Catholics often refer to the "Tanakh" with the name of "Old Testament." Catholics also have other sacred books. These books come from the time of the Second Temple of Jerusalem. These texts are not considered divinely inspired by Jews, Protestant Christians, and Muslims. These scriptures are known as the "Deuterocanonical Books." These books have shaped the Catholic perception of death. It is very different from how death is seen by other Abrahamic religions. The "Deuterocanonical Books" have plenty of pagan influence regarding death beliefs and rituals.

Some of these ideas can be traced to Greek books, such as the "Phaedo" dialogue of Philosopher Plato. Other ideas are even more ancient, such as the texts that have been translated by archeologists from ancient Egyptian sources, like the pyramids, coffins, and the "Book of Coming Forth by Day," popularly known as the "Book of the Dead."

Now, I shall compare Christian protestant beliefs with Catholic beliefs regarding death. According to Evangelical Christians, when

someone dies, the person undergoes the experience that is described in the "Book of Revelation," part of the "New Testament." According to this text, after death, the dead souls wait until the Last Judgement (Yom HaDin), which is going to happen during the End of the World (Eschaton). On that day, they will be resurrected, and after judgment, they will be sent either to Paradise (Gan Eden) or to Hell (Tártaros), according to their deeds or to their faith in the salvation that was awarded through the death and resurrection of Jesus. One of the most important sources of the Catholic view on death is a text from the time of the Roman Empire known as "2 Esdras." In this book, it is stated that the souls of dead people can immediately access Paradise after dying. That is why Catholics make prayers of intercession to dead people who were highly righteous, the saints (tzadikim). According to Catholics, these individuals are already resurrected and in full possession of their mental faculties in Paradise.

According to the "Deuterocanonical" book known as "2 Maccabees," it is thought that sinners are sent to Purgatory (Gehinnom) immediately after death. They suffer punishments in such places until they pay for their sins. When their sins are forgiven, they are sent to Paradise. People pray for the souls in Purgatory so they can rest in peace, as they are penitent souls. In the towns of Central Mexico, it is believed that penitent souls are ghosts. They are feared by people, as they are sinners, so they can cause harm with their great supernatural powers. According to legends, they can be seen and heard by any average passersby as scary apparitions. As they have great spiritual powers, some Mexican Catholics pray to them to ask for miracles.

An example of this is the cult of the "Anima Sola," a soul in Purgatory. Not only Catholic ghosts are feared in Mexico. Plenty of demons and warlocks from the times of pre-Columbian Mesoamerica are said to roam the wilderness, ready to scare people. The names of these unclean spirits reflect their Indigenous origins, as they are part of the traditions of native ethnic groups such as the Nahua, Otomi, Mixtec, Zapotec, Maya, Lacandon, Tzotzil, Wixárika, Cora, Chichimec, Rarámuri, Cochimi, Kickapoo, or Apache. Some cults from popular Mexican Catholicism are not accepted by ecclesiastical authorities. Some of these cults include worshipping folk saints such as Jesús Malverde, Juan Soldado, or Santa Muerte (San la Muerte in South America).

In many of the pagan religions from the Roman Empire, there were female persons who were highly revered. The cult of the Lunar Goddess Artemis Diana in Ephesus, the mysteries of the Great Mother Cybele in Anatolia, the mysteries of Goddess Isis from Hellenistic Egypt, and the cult of the Virgin of Light in Manichaeism, influenced ancient Christianity by increasing the prestige of the Virgin St. Mary, the mother of Jesus. The

cults of the pagan Goddesses were adopted by Christians who started to worship St. Mary. In the Middle Ages, St. Bernard of Clairvaux suggested that Mary should be worshipped alongside Jesus because she was an intercessor of every Catholic. He stated this in his homilies titled "De Laudibus Virginis Matris." As a result of the ancient cult of Mary, all modern Catholics have a great devotion to her. In Catholic doctrine, she is a resurrected saint that lives in Paradise as a queen. When the Aztecs were conquered by the Spaniards, the cult of Mary was introduced. Soon, she was syncretized with the Aztec Goddess Tonantzin. Hence, the most important cult in Mexico City is the worship of the Virgin St. Mary of Guadalupe, the depiction of Mary whose cult became mixed with the worship of Tonantzin.

The modern cult of the Virgin of Guadalupe commemorates when St. Juan Diego saw an apparition of the mother of Jesus in the 16th century. She told him that a Catholic temple should be built in the place where she talked to him. Such temple is now known as the Basilica of Our Lady of Guadalupe, in Tepeyac, in the north of Mexico City. This story is written in the "Nican Mopohua." This text is not part of the "Bible" or the "Deuterocanonical Books," but the Catholics of Mexico consider it a truthful account. The Virgin of Guadalupe is depicted as the Virgin, who appears in the "Book of Revelation" as "a woman clothed with the Sun, and the Moon under her feet."

CHAPTER 2. *LAELIA SPECIOSA*

My mother, Marisol, was born in Coyoacán, Mexico City, Mexico. She grew up in a family with one brother and three sisters. The mother tongue of her father, my grandfather Tomás, was Nahuatl, the language of the Aztecs. My grandfather Tomás was a descendant of a pre-Hispanic Teochichimec tribe whose queen decided to inhabit Apetatitlán, on the banks of the Zahuapan River in the upper Balsas River Basin. This place is located northwest of the volcano known as the Most Holy Matlalcuéyetl, which was worshipped in the Teochichimec religion.

The queen decided to live in such a place with all her subjects because there was already another Teochichimec tribe living there. They also spoke the same language and worshipped God Camaxtli. The people of Apetatitlán claimed that the newly arrived foreigners were naguals and tlahuelpuchis, so they were banished and sent to live in a mountain that is now known as Cerro de la Virgen Inmaculada de Belén Atzitzimititlán. A tlahuelpuchi is a legendary woman who removes her legs during the night to fly as a shiny fireball. She looks for babies and children to kill them by sucking their blood. Eventually, the different Teochichimec tribes united to create the Republic of Tlaxcala, a nation-state that was usually fighting wars against the Aztec Empire. The Tlaxcalan ancestors of my grandfather Tomás helped Hernán Cortés to conquer the Aztec Empire to enlarge the Spanish Empire. The Spanish government acknowledged the nobility of the families of the Tlaxcalan leaders who supported Spain in its wars and allowed them to govern Tlaxcala.

The family of my grandfather was one of these families. They were considered hidalgos, so they had more rights than most citizens. The Peninsulares, Criollos, and Mestizos were able to access nobility privileges by marrying Tlaxcalan aristocrats. In that way, they could decrease the power of Indigenous People. To keep these privileges within a family, Tlaxcalan noble families tried to preserve their "purity of blood" at all costs, even by practicing incest and becoming consanguineous. Thus, their children expressed recessive alleles that led to physical deformities.

When humans have children with a close relative, genetic diversity is reduced, so there is a higher chance that both copies of a gene are the same allele. In this way, some of the recessive alleles that are found in human populations are expressed. These alleles that often code for teratological phenotypes or genetic disorders were not purged by natural selection because they cannot be expressed if

***Laelia speciosa* (Kunth, 1816) (Asparagales: Orchidaceae)**

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the same locus in the homologous chromosome has a dominant allele that codes for the healthy phenotype. Only when recessive alleles that code for birth defects are homozygous is there an effect in the phenotype.

Noble Tlaxcalan Indigenous families stopped having a monopoly in the government of Tlaxcala and became less socially relevant when they were not as useful to the authorities of the Spanish Empire. At that point, many of these families became as poor as most Indigenous People, but they still owned their ancestral Mesoamerican land properties with Nahuatl names. Even with this situation happening, the family of my maternal grandfather was obsessed with blood purity. They kept their obsession even after the Independence of Mexico and after President Benito Juárez abolished nobility titles. Hence, they kept marrying close relatives. Therefore, my grandfather was born with six fingers on one hand. Afterward, a surgeon removed the extra finger.

Tomás, my maternal grandfather, was born a poor farmer in Atzitzimititlán, Tlaxcala, Mexico. His family cultivated mayflower orchids (*Laelia speciosa*), maize (*Zea mays*), common beans (*Phaseolus vulgaris*), runner beans (*Phaseolus coccineus*), black cherries (*Prunus serotina*), Mexican hawthorns (*Crataegus mexicana*), figleaf gourds (*Cucurbita ficifolia*), silver-seed gourds (*Cucurbita argyrosperma*), pumpkins (*Cucurbita pepo*), and white sapotes (*Casimiroa edulis*). They also farmed turkeys (*Meleagris gallopavo*) and chickens (*Gallus gallus*). They plowed the soil using a plough drawn by oxen (*Bos taurus*). Their economy was based on subsistence farming. However, when they had surpluses in production, they sold what they produced as peddlers to acquire money. After harvesting all the fruits that belonged to the genus *Cucurbita*, it was common in Tlaxcala that they would be left to ripen together in the Sun on top of the roofs.

During the rainy season, my grandfather Tomás always wore the folk costume of his town while he was a child. It was a huge Indigenous pre-Hispanic rain cape that was handmade from palm leaflets (*Brahea dulcis*). This rain cape was referred to as "nahual." He used to bathe in the traditional Indigenous pre-Hispanic steam bath known as temazcal. He had one in his home, as all the farmers did. The temazcal is a sauna made of mudbricks. People entered inside of it on all fours. The water (H_2O) vapor was produced by a container with an herbal infusion in boiling water. The plant species contained in this infusion were *Piper auritum*, *Salvia rosmarinus*, *Heterotheca inuloides*, and *Tagetes lucida*.

In May 1910, Francisco Madero was traveling in Mexico as part of his presidential campaign to overthrow dictator Porfirio Díaz. He went to Puebla de los Ángeles, Puebla; from there, he went to

Tlaxcala City, Tlaxcala; from there he visited Xalapa, Veracruz. My grandfather Tomás and my great-grandmother Asunción saw Madero while he was visiting Tlaxcala as part of his political campaign. After that, Madero would lead the Mexican Revolution.

My grandfather Tomás learned how to dance the Huehues Dance. It is a traditional folk dance of Tlaxcala. The dancers dress up as wealthy people. They wear masks made of pine wood (*Pinus ayacahuite*) to resemble the faces of White European people. When my grandfather was young, this dance was performed by cisgender men wearing male clothing and transgender persons wearing female clothing. In modern times in Atzitzimititlán, this dance is only performed by cisgender people. However, in Contla de Juan Cuamatzi, Tlaxcala, this dance is still performed by transgender persons, and no cisgender women perform it (to listen to the music played in the Huehues Dance, listen to "Danza de cuadrillas (nahuas)" (1970)).

I have never had a friend or acquaintance who is a transgender or transsexual person because they are very scarce. Yet, in old times, among the Nahua Indigenous People of Tlaxcala, it was a tradition that many men became transgender persons in the carnival.

None of the members of my grandfather Tomás's family had a bachelor's degree. But my grandfather wanted to progress socially and economically, so he traveled to study in Tlaxcala City, Tlaxcala. Mexican President Plutarco Elías Calles was a racist. He thought that White European people were more biologically and culturally evolved than other human ethnicities. The president wanted to develop Mexico into an industrialized society, and he thought that if native Indigenous Mexicans could not develop the intellectual abilities of White Europeans, they would be a hindrance for Mexico. To know if it was possible to civilize Indigenous Peoples and to provide them with the same level of intelligence as White Europeans, he pioneered a psychological experiment with "pure breed" Indigenous People. This experiment was known as Casa del Estudiante Indígena and was headquartered in Mexico City.

My grandfather Tomás was selected for such a racist experiment. He was going to be "civilized" by providing him with an elite European education. After graduating from Casa del Estudiante Indígena, my grandfather studied to become an elementary school teacher at Escuela Nacional de Maestros. Nowadays, it is known as Benemérita Escuela Nacional de Maestros. He became a politician while being a member of a political party known as Partido Nacional Revolucionario (PNR). This party changed its name to Partido de la Revolución Mexicana (PRM). While a member of this party, he became a colleague of Lino Santacruz, an important politician

who later became the godfather of my maternal grandfather's children. During the Second Cristero War, my maternal grandfather was taken prisoner by a group of Cristeros who were fighting against the Mexican government. The Cristeros almost mutilated the ears of my maternal grandfather, along with the ears of other schoolteachers, because they claimed that they were educating children against Catholic values. He was freed together with the other schoolteachers thanks to the negotiations of President Lázaro Cárdenas. Fortunately, his ears were not mutilated. The work and effort of my grandfather Tomás as an elementary schoolteacher and politician of the PRM, which is now known as Partido Revolucionario Institucional (PRI), allowed him to live a middle-class life in Coyoacán, Mexico City.

His family wanted him to marry an Indigenous woman from his own town who would be his genetic close relative. However, he married a Mestiza from Toluca, State of Mexico. She was the daughter of a Spanish father and an Indigenous Otomi (Hñatho) mother. Thus, my mother was not consanguineous. Tomás's mother, my great-grandmother Asunción, hated her daughter-in-law. She called her cuitlacihuatl (shitty woman) and ahuiani (whore), because she was not a descendant of the Tlaxcalan aristocratic lineages. Asunción was angry that her son did not practice incest, so she killed her own grandson, my uncle Luis Reyes, when he was one year old, as he was not a pureblood Tlaxcalan. The corpse of the baby was buried in the graveyard of a church known as Iglesia de Nuestra Señora de Belén, Atzitzimititlán. This place is now a public square that is found west of the church (19.347445557578247, -98.19015338706942). When my grandmother went to the funeral and inhumation of Luis Reyes, she offered him white flowers that belonged to the species *Gypsophila paniculata*. This species was used in Tlaxcala in children's burials, as it means purity. It is said that children have never sinned, as they have not lived enough to sin.

During the inhumation, all people were smoking tobacco (*Nicotiana tabacum*) cigarettes, as it was believed that tobacco smoke exorcized the ghosts of such a jinxed graveyard that harmed living people by producing the illness known as "mal aire" (bad air). Since then, my maternal grandmother hated her husband's family. When my mother was a child and met her grandmother Asunción for the first time, the elderly woman bit my mother's cheek with her toothless jaws as she was full of hatred against her. She did that instead of kissing her with love. My mother cried and shed tears.

My father, Ernesto Alvarado, was born in Vista Hermosa de Negrete, Michoacán, Mexico. He grew up in a family with six

brothers and five sisters (please see Appendix A for more information about his family). My father's family was a Mulatto family. This means that he had both Black and Spanish ancestors. The origins of my paternal family are found in the Black African slaves that were owned by the Spanish family Salceda Andrade. They had illegitimate children with their masters due to the droit du seigneur that slave owners had. The droit du seigneur means that after two slaves are married, the owner has the right to have sex with the slave bride before the slave groom. Moreover, Spanish masters were able to have sex with any slave that they owned; as such, girls and women were their private property.

My father's ancestors always worked for the owners of the Hacienda de Buenavista & Cumuato, a plantation whose production was based on slave labor. During the time of the Viceroyalty of New Spain, the place where my father was born a century and a half later was in the middle of the tropical deciduous forest, 3 km away from the enormous Lake Chapala. Nowadays, the lake is 20 km away from the town. That is because a dam was built to dry part of the lake. That dam is known as Dique de Maltaraña. The plantation was split, and my ancestors remained in the Hacienda de Buenavista, which was itself split again, leaving them as slaves in the Hacienda del Molino. The owner of the Hacienda del Molino was so wealthy that in his quince (*Cydonia oblonga*) orchard, he had as pets two giant tortoises (*Aldabrachelys gigantea*)! My ancestors were always oppressed by the slave owners until the Mexican Revolution. After this war, slavery was banned. Furthermore, the agricultural fields stopped being the property of plantation owners and were given to the workers. These were the revolutionary doctrines of General Emiliano Zapata.

My paternal great-grandfather Severo obtained plenty of acres from the former Hacienda del Molino that were handed to him in 1923 by Sidronio Sánchez, the governor of the State of Michoacán, in exchange for obtaining agricultural production from them. With so much land, Severo became rich. He cultivated onions (*Allium cepa*), maize (*Zea mays*), sorghum (*Sorghum bicolor*), common beans (*Phaseolus vulgaris*), pumpkins (*Cucurbita pepo*), and tomatoes (*Solanum lycopersicum*). His family plowed the soil using a plow drawn by mules. Mules are the infertile hybrid offspring of a horse (*Equus caballus*) and a donkey (*Equus asinus*). Severo's family economy was based on monocultures. They sold the production of their land to the large storehouses of the Mexican government and to the depots of private entrepreneurs from Yurécuaro, Michoacán; Zamora, Michoacán; and La Barca, Jalisco, Mexico. 10% of their agricultural production was freely handed to the Catholic Church as a tithe.

Severo's son was my grandfather Néstor. He was rich thanks to all the agricultural production that he inherited from Severo. My grandfather Néstor lost all his wealth due to a forbidden love affair with a young nurse who was not his wife. The legitimate wife of Néstor was Madame Araiza. The nurse was married as well. So, their relationship was hidden from society. One day, the legitimate husband of the nurse found his young wife having sex with my grandfather Néstor. My paternal grandfather ran away out of the window while he was totally naked toward his home.

The nurse's legitimate husband felt that he was dishonored, so he was looking for Néstor to kill him. My grandfather Néstor knew that he would be murdered unless he left the town; he had many agricultural lands, but not have enough time to sell them, as in that time, the nurse's husband would be able to find him and kill him with his gun.

To solve this problem, he handed his agricultural lands as gifts to his friends. As they were post-revolutionary rural lands, there were no legal property titles associated with them, unlike nowadays. Therefore, Néstor was able to get rid of them very quickly. His eldest daughter, Margarita, was living with her husband in La Loma, Tlalnepantla, State of Mexico. My grandfather Néstor, his wife, and his children moved to Tlalnepantla. In that way, the nurse's husband would not be able to kill Néstor. My father was among Néstor's children who moved to Tlalnepantla. Néstor became poor in a few months, as his only source of income was the agricultural lands that he granted as gifts to his friends to save his life. He spent all his savings as he had not been setting money aside. He usually spent all his income without keeping savings, as he never thought he would need money in an emergency while he was rich. His poverty was even more severe than expected because he had to provide economic resources for his wife and his ten children, who were not yet married. He rented a single bedroom for himself and all his family and could not afford more than that. The bedroom that became his new home was found in La Loma, Tlalnepantla.

When my father was a child, he attended a school in Vista Hermosa de Negrete that was managed by the Society of Jesus. The Catholic clerics who worked as schoolteachers in such schools were educating my father to become a Catholic priest. However, since the financial collapse of Néstor, my father decided to work in something that would allow him to become wealthy. My father was highly traumatized due to the experience of having plenty of money while he was in Vista Hermosa de Negrete and becoming poor in a matter of months when he had to move with his family to Tlalnepantla. My father aimed to stop being poor at all costs. He studied at

school and worked at the same time. He decided to study for a bachelor's degree in chemical engineering at the most prestigious university in Mexico, Universidad Nacional Autónoma de México (UNAM). That would allow him to work in industry and have a better social class.

My mother grew up being cared for by my uncle Jorge Reyes Mejía. My grandfather Tomás was a workaholic and almost never at home. He attended plenty of parties and clubs with his friends and extramarital love affairs. My grandmother Lorenza ruled her house in a heavy-handed way. She would punish my mother, Jorge Reyes Mejía, and my three aunts for any small mistake. Jorge was educated by Lorenza to follow all her orders strictly. He was an army surgeon and chose such a career because that was what Lorenza ordered him to do. Nevertheless, he loved natural history more than military medicine. He loved plants, birds, and moths. On weekends, when he was allowed to leave the military barracks, he would go to the forests and wetlands that surround Mexico City. My mother was always his companion.

My uncle Jorge Reyes Mejía married a woman, Esperanza, who did not love him. She courted Lorenza with gifts and compliments so she would choose Esperanza as her son's fiancé. Esperanza did not finish elementary school and was quite uneducated. Nonetheless, she knew how to use the jimsonweed (*Datura stramonium*) to harm the cognitive functions of those who ingest it. She was able to do this because she was a practitioner of an African diaspora religion based on magic. However, that was a secret membership, as she publicly claimed to be a Catholic. She used her secret knowledge of jimsonweed pharmacognosy to keep my uncle quiet while she was openly having sex with plenty of male sexual partners.

My uncle always protected soldiers from the oppression and unfairness of officers holding higher ranks. As a result, he was punished by some generals of the army by being banished from Mexico City to an obscure military detachment in Tuxpan, Veracruz. He lived there with Esperanza, one son, and two daughters. My uncle Jorge Reyes Mejía bought some furniture in Sayula, Jalisco, the birthplace of Esperanza. The furniture was kept in the house of my maternal grandparents for a while, and after that, there were cockroaches (*Blatella germanica*) in the kitchen.

The African diaspora religions like the one practiced by Esperanza are syncretic religious movements that mix Christian Catholicism, Equatorial African native religions, and occult knowledge from the Poro and Sande secret societies of West Africa. Their practitioners are the descendants of the Black African slaves who were introduced to the New World during the times of the Spanish Empire. Their members seldom acknowledge in public

that they believe in these religions, as the origin of these faiths is rooted in tribal secret societies. Another reason that increased their secrecy is that these religions were persecuted during Spanish colonial times by the Catholic Church through its Holy Inquisition branch. The aim of this was to eradicate these religions so they could not outcompete the hegemonic Catholic Church. Another reason to keep these religions in secret is that the modern Mexican government persecutes these religions because it considers the ritual sacrifice of vertebrates as a crime. Moreover, the members of these churches have always been feared due to their knowledge of drugs and poisons found in wild herbs. As no one knows who a practitioner of an African diaspora religion is and who is not, these religions were seen as a threat to the social order of New Spain. This idea continued in independent Mexico.

Some friends of my grandfather Néstor decided to invade the land that belonged to some farmers of Tlalnepantla to steal it from them. My grandfather Néstor joined them to help them in such a crime so he could steal some land as well. Néstor and the other thieves built small huts on the land they wanted to steal and fought with guns against the legitimate owners. Néstor was able to steal a land lot where he built a private house for his family. The government of Tlalnepantla named that neighborhood built on stolen land Colonia 21 de Marzo. This name honors the 21st of March, the birthday of former president Benito Juárez.

My uncle Jorge Reyes Mejía influenced my mother in such a way that she grew up wanting to become a biologist. Nevertheless, she did not study for such a degree at university, as she disliked animal dissections. Thus, she decided to study chemical engineering instead of biology at UNAM. According to my mother, she could also study biological entities from a molecular point of view without having to dissect them. When my mother attended university, the members of a political party known as Partido Comunista Mexicano (PCM) indoctrinated her to believe that the end of Mexican social inequality was achievable by following the teachings of Karl Marx. They claimed that Mexico needed to become a dictatorship of the proletariat, that a planned economy should be established, and that a totalitarian head of state should be crowned to rule Mexico. This despot should be a puppet of the Union of Soviet Socialist Republics.

While spending time with communist friends, my mother met several members of the terrorist group known as Liga Comunista 23 de Septiembre. She then knew how the Mexican government jailed and killed several members of the terrorist organization. My mother decided to stop being a communist political activist, as she was worried for her safety and the safety of

my uncle, Jorge Reyes Mejía, who was a member of the Mexican army. Her decision to stop being an activist was the result of an event that happened at that time—an agent of the government's secret police, the Dirección Federal de Seguridad, spent a long time spying on the house of my maternal grandparents, looking for communist activity that could involve a conspiracy against the government.

My father knew that working hard almost never ensured success. That was why he decided that, to join a wealthier social class, the first step would be marrying a woman with money. Afterward, he would look for a woman that he genuinely loved. He met my mother at university, thanks to Professor Antonio Frías. She was a middle-class young woman from Coyoacán. For my father, she was the opportunity that he was looking for to stop being poor. Due to his cunning charm, he was able to seduce her very easily without feeling any love for her. My mother wondered why my father ignored her in public while they were with their classmates in the Faculty of Chemistry at UNAM and only showed love for her while they were privately caressing each other sexually or while having sex.

Despite having such a dysfunctional relationship, they married on Monday, the 24th of September 1979. During my mother's pregnancy, there was a solar eclipse in Mexico City on Wednesday the 30th of May 1984. That day, my grandmother Lorenza dressed up my mother in red, placed open scissors with the shape of a cross under her pillow, and placed a seed of *Mucuna sloanei* on her as a charm. She also told my mother to remain indoors during the eclipse. All these superstitious folk traditions attempt to avoid the spirit of the ghostly jaguar (*Panthera onca*) of the eclipse, which can harm the fetus and lead to a cleft lip and palate in the newborn child after gestation.

I am a male Latino. I was born on Sunday, the 9th of December 1984, in Hospital Mocel. This hospital is now known as Hospital Ángeles Mocel. This place is in San Miguel Chapultepec, Miguel Hidalgo, Mexico City (19.410818877218055, -99.1848005122165). I was born during the reign of President Miguel de la Madrid. When I was born, the Sun dwelt in the constellation known as Ophiuchus, the bearer of the serpent (*Zamenis longissimus*). The Moon dwelt in Gemini, the divine twins (to find out why this information does not agree with the signs of the zodiac of astrology, please see Appendix B). At that time, my father was living in the Coyoacán house of my maternal grandparents. He did not want to go back to Tlalnepantla as that reminded him of his poverty when he was a teenager. Therefore, after I was born, I lived in the house of my maternal grandparents. As my mother knew how Asunción killed her brother Luis Reyes before she was born, she thought that it would be extremely

dangerous for me to have any contact with my paternal family. We should keep in mind that Asunción was part of Luis Reyes's paternal family. Hence, my mother kept all my paternal family, except my father, away from me. I only met my paternal grandparents once in my life.

My three aunts, who lived with my maternal grandparents, were single. All of them were elementary school teachers. Yolanda was the eldest one of them. She married twice, but she divorced twice. Her first husband was José Sotelo. Her second husband was Jorge Villanueva. She never had any children, so after the last time she got divorced, she decided to live in the same house as her parents, Tomás and Lorenza.

Luisa was born after Yolanda. She was named after Luis Reyes, the dead son of my maternal grandparents. She loved to entertain me, telling me fairytales from Christian Europe and Dar al-Islam. She knew an extremely large number of tales because each week, she told a different tale to her child pupils. She has never married, and she has never had any children. The youngest of them was Ana Reyes, but she was older than my mother. Since her childhood, Ana Reyes had psychiatric problems. Moreover, she was addicted to smoking tobacco (*Nicotiana tabacum*). Fortunately, my grandmother Lorenza did not allow her to smoke indoors, and when I was in my house, she was not even allowed to smoke outdoors. Ana Reyes hated her mother, Lorenza, and blamed her for all her suffering in life. She has never married, and she has never had any children. In a way, my three aunts adopted me as if I were their own son. When my mother was six years old, the experience of Yolanda's first marriage changed how Luisa and Ana Reyes viewed marriage, so they decided to avoid marriage.

Now, I will tell the story of Yolanda's first marriage. José Sotelo from Ciudad Juárez, Chihuahua, Mexico, lived in the house of my maternal grandparents. He was a friend of Arturo Urbina, who was a friend of Umberto, who was a friend of my uncle Jorge Reyes Mejía. Using his friendship network, he was allowed to live for free in my grandparents' house as he needed to live in Mexico City while studying dentistry at UNAM. My grandmother Lorenza fell in love with him, but he decided to seduce my aunt Yolanda because he wanted her money. When Lorenza found her daughter Yolanda and Sotelo having sex in bed, she grabbed Yolanda's hair and pulled her hair with all her strength. From then on, Lorenza hated Yolanda because she was in love with Sotelo. The intense hatred that Lorenza displayed continuously toward her daughter Yolanda was a learning experience for my aunts Luisa and Ana Reyes. They understood that having a sexual partner was something wrong, as they were naïve and did not properly understand the situation. That is why they never married or had children.

Lorenza and Tomás forced Yolanda to marry Sotelo so she would not live in sin and would not dishonor her family. Yolanda was already a schoolteacher with a good income, so she used to freely give money for all Sotelo's needs, as he did not have any income while he was a college student. Sotelo found a new lover that was richer than Yolanda. She gave him enough money to open his own dental clinic. He obviously divorced Yolanda. Yolanda was an adult education schoolteacher, so she became a sexual partner of many of her pupils. Eventually, she became the sexual partner of two students from the same classroom at the same time. Both her male sexual partners became love rivals. They fought for her love, and in the duel, one of them stabbed the other. The slayer left the school and the city to avoid being imprisoned by the police. Yolanda felt so much remorse that she became an alcoholic, an ethanol (C_2H_6O) addict. Her addiction was so bad that when she did not have any alcoholic beverages at hand, she used to drink antiseptic ethyl alcohol from the pharmacy diluted in water.

Now I shall tell the story of her second marriage. Jorge Villanueva was a man who lived with his concubine and children in Xochimilco, Mexico City. Yolanda became his sexual partner. Villanueva's concubine went to the school where Yolanda worked to rebuke her for having sex with her man. Yolanda decided to marry Villanueva to defeat the concubine. After they married, Villanueva asked Yolanda to buy a car for him. Said car became the property of Villanueva, his concubine, and his children. Yolanda decided to live in the same home as her husband, so they rented a flat close to what is now Glorieta de Vaqueritos, Coyoacán. Yolanda lived alone, as Villanueva spent all the time in his other home with his concubine and the rest of his family. They got divorced. At the time when I was born, Yolanda was single.

The first property I lived in was built in 1953. Several hundred years before such a house was built, that place was part of Lake Texcoco. 530 m away from the place where the house was built, there was a solidified lava field that was formed during the last eruption of Mount Xitle, a volcano. That lava field is known as Pedregal de San Ángel. During pre-Columbian times, the village of Hueytlilac was founded on the edges of Pedregal de San Ángel.

The people who lived in such villages grew vegetables, fruits, and grains over Lake Texcoco. They were able to do this by making chinampas (chinamitl in Nahuatl). Chinampas were small artificial islands. Bonpland's willows (*Salix bonplandiana*) were grown at the edges of the chinampas so they could hold the soil with their root systems, preventing it from being washed away by the water of the lake. In that way, the chinampas could become agricultural fields. All chinampas were surrounded by canals. During pre-Columbian times, the

Aztec Deities were worshipped in the temple of Hueytlilac. After the conquest of the Aztec Empire, the Spanish invaders built a Catholic church known as Parroquia de los Santos Reyes. Due to this, the town was renamed Pueblo de los Reyes. The name "Los Reyes" is a Catholic name that refers to the Zoroastrian magi who worshipped Jesus, the founder of Christianity, when he was a child. During the 20th century, a new Catholic church was built in the same place where the church from the time of the Viceroyalty of New Spain was found. This new church is known as Parroquia de los Santos Reyes y del Señor de la Misericordia.

When this church was built, a lot of soil was extracted to build the underground foundations of the new building. When the builders performed the digging, they found the ruins of the ancient Aztec temple. The sculptures of the Aztec Deities that were found there were placed by the builders on the walls of the new Catholic church. My mother and my uncle Jorge Reyes Mejía still saw such sculptures. According to the "Mapa de Uppsala" (1556), an old map from the 16th century, the place where my childhood house currently stands was chinampas. (This is known because it is labeled with the same kind of landscape as the north of Xochimilco.) A neighborhood that is quite close to my childhood house was formerly named San Lorenzo Chinampan, many years before I was born. The name of that neighborhood is a memory of the time when there were chinampas.

My grandfather Tomás commissioned the building of the house on the land that he purchased. The house was on the shore of a small wetland. Such wetland was part of the remains of the chinampa landscape. In the wetland, there were still frogs (*Dryophytes eximius*) and killdeers (*Charadrius vociferus*). Close to there, there was a larger lake in Xotepingo, Coyoacán. In the surrounding area around the newly built house, there were still plenty of canals with Bonpland's willows in their banks. That was what was left of the old chinampas. In the lakes and the canals, there were fishes such as *Chirostoma jordani*, *Chirostoma humboldtianum*, and *Girardinichthys viviparus*. Such water bodies were also inhabited by dwarf crayfish (*Cambarellus montezumae*). The land belonged to the farmers of Pueblo de los Reyes, Coyoacán. Such land was used to cultivate rose flowers (*Rosa* spp.). Therefore, the new neighborhood was named El Rosedal by the government of Coyoacán. The landscape changed beyond the last water canal that was found in what is now the avenue named Avenida Pacífico. That was the place where Pedregal de San Ángel was found. It was a wasteland full of black basalt rocks, cracks, caves, and *Buddleja* scrubs.

The landscape continued southwards until it reached the mountainsides of Mount Xitle. There, the landscape was replaced by

Quercus forests. The most charismatic animals that lived in Pedregal de San Ángel were Virginia opossums (*Didelphis virginiana*), gray foxes (*Urocyon cinereoargenteus*), ringtails (*Bassariscus astutus*), black-tailed rattlesnakes (*Crotalus molossus*), Mexican Plateau horned lizards (*Phrynosoma orbiculare*), Harris's hawks (*Parabuteo unicinctus*), Woodhouse's scrub-jays (*Aphelocoma woodhouseii*), northern mockingbirds (*Mimus polyglottos*), scorpions (*Vaejovis mexicanus*), and tarantulas (*Aphonopelma anitahoffmannae*). While Tomás's house was still being built, cowboys from Pueblo de los Reyes continuously trespassed on it. The cowboys wanted to water their cows (*Bos taurus*), which is why they trespassed in the house every day. To stop that from happening, my grandfather Tomás decided to inhabit his house with all his family even before the builders were able to finish it. In that way, my family protected the house from invaders. When the house was finally totally built, they had already inhabited it for some time.

Around 1956, my aunts Yolanda and Luisa saw something creepy. They were teenagers living in the newly built house with no other houses around at the time. It was night. They were peeking out of the window; the light was turned off. Suddenly, they saw a car moving slowly. A rope was attached to the back of the car, tied around a human corpse covered in a blanket. It seemed the killer saw my aunts, because the car turned around at the end of the street to check once again. My aunts ran away quickly to the bed, terrified to think that the killer saw them!

When I was born, there were no wetlands, horticultural fields, or cows. The small wetland behind my house was dried. The water from the Xotepingo spring was buried underground inside man-made pipes. All the countryside was substituted by paved streets and large avenues with plenty of cars, and all the land was used for private housing. The last natural remains that were still left by the time I was born were a few small springs in Pedregal de San Ángel close to my house that were still inhabited by wild turtles (*Kinosternon integrum*). However, these springs were surrounded by houses. At that time, there were also a few vacant lots in Pueblo de los Reyes, in Pueblo de la Candelaria, Coyoacán, and in Barrio del Niño Jesús, Coyoacán. These vacant lots were still part of the ecosystem of Pedregal de San Ángel. They were inhabited by northern cardinals (*Cardinalis cardinalis*). Nevertheless, these vacant fields became urbanized by the time I was in elementary school.

El Rosedal neighborhood, the place where I lived during my childhood, had plenty of middle-class houses with ground floors and first floors. All of them had small gardens in front of them that were seen by people walking down the street. In the middle of

the neighborhood, there is a long public park known as Jardín de las Rosas. In this park, there were plenty of trees of different species. There were also herbs and shrubs with beautiful flowers, most of them belonging to the genera *Iris* and *Rosa*. Inside the flowers that belonged to the genus *Iris,* there were always beetles (*Euphoria basalis*). In the center of the park, there is a Catholic church with huge stained glass. The stained glass depicts the Virgin St. Mary of Guadalupe with a kneeling man at her left and a standing man at her right. In the façade of the church, there is a depiction of Jesus escorted by four angels: a lion (*Panthera leo*), a bull (*Bos taurus*), a person, and an eagle (*Aquila chrysaetos*). When I was born, the other side of the Los Pinos Avenue was part of Pueblo de los Reyes. Such neighborhoods comprised slums full of poor people living in shanty towns. These people were more violent than the people who lived in El Rosedal, as many of them were members of criminal gangs. The area of Pueblo de los Reyes, which was found beyond the avenue known as Avenida Pacífico, was inhabited by middle-class people. Their houses were very old, as that was the part of the town that was built during the time of the Viceroyalty of New Spain. Such people were peaceful, unlike the ones living in the shanty towns of El Bordo and El Rastro.

In the place where I was born, winter and spring were sunny. Summer and autumn were cloudy and rainy.

The most impressive wild animals in my neighborhood at the time I was born were house mice (*Mus musculus*), brown rats (*Rattus norvegicus*), mesquite lizards (*Sceloporus grammicus*), Inca doves (*Columbina inca*), broad-billed hummingbirds (*Cynanthus latirostris*), rufous-backed robins (*Turdus rufopalliatus*), house sparrows (*Passer domesticus*), house finches (*Haemorhous mexicanus*), two-tailed swallowtail butterflies (*Papilio multicaudata*), magnificent swallowtail butterflies (*Papilio garamas*), and black witch moths (*Ascalapha odorata*).

On the floor above the ground floor of the house of my maternal grandparents, there is a bathroom with a mirror. When my mother was a child and used to go to the toilet to that bathroom, and the lights were turned off, she was able to see a person reflected in the mirror that walked from the door toward the window. This person was not truly in the bathroom. It was only an apparition in the mirror's reflection. My mother was afraid of that mirror. When my mother was a teenager, my grandmother Lorenza employed a domestic worker who was living in the house. Her name was Helena. According to her, the northwestern room of the ground floor where she slept during the night was haunted by La Llorona

and could be seen and heard in the nights in the street from the window. La Llorona is a pre-Columbian female ghost. She weeps, cries, and screams at night.

Afterward, there was another domestic worker living in the house. Her name was Victoria. She slept in the same room as Helena, and she also claimed to have seen and heard La Llorona crying during the early morning hours. No one told her about Helena's sightings of La Llorona. Some years later, a lady whose name was Madame Pacheco, who lived on the same street as my family, claimed to have seen a woman in white in the early morning. The woman in white was levitating a few centimeters above the street. The mysterious woman was able to move through the air without walking with her feet. This woman was La Llorona.

According to the Aztecs, La Llorona haunted Lake Texcoco. In Xochimilco, it is said that La Llorona haunts the canals around the chinampas. The house where I lived during my childhood was built in what was, during prehistoric times, part of Lake Texcoco. Later, chinampas were built there in pre-Columbian times. Moreover, the house is 140 m away from Panteón del Divino Pastor, the graveyard of Pueblo de los Reyes. This graveyard was founded in 1895. Initiates of African diaspora religions visit this graveyard to perform rituals of dark magic. These necromancers hexed the graveyard. Hence, when a new grave is dug, it should not be kept open for more than a day because that causes the death of more people from Pueblo de los Reyes.

There is another ghost story from the street where my childhood home is found. Rosendo Oropeza Barrera was a professional musician who played one of the violins in a famous classical music orchestra, the Orquesta Sinfónica Nacional. Once, he was traveling with his family on the highway between Mexico City and Puebla de los Ángeles, and he suffered a car accident. He died. Soon, his house became a haunted place. His family left the house because the supernatural events became unbearable. One of his sons bought a new house nearby but refused to inhabit the haunted home. Sometimes, in the haunted house, the sound of someone playing a violin could be heard. That happened when no one was inside the house. My aunts and my parents heard the ghostly violin playing there. Years later, someone rented that house, and one evening, they had a party in which loud music was played. Then, his music-producing equipment was levitated and brutally thrown out of a closed window, whose glass was broken. The machine was destroyed, and the scared tenant left the property. The musician became a poltergeist!

CHAPTER 3. *URSUS MARITIMUS*

It is said that on Thursday, the 19th of September 1985, there was a horrible earthquake in Mexico City. The epicenter of such an earthquake was in the Pacific Ocean, south of the Balsas River delta, Michoacán. I do not remember that earthquake. Since childhood, every time I am relaxing in bed, I love to stare at the light bulb in the ceiling. According to my aunt Luisa, I started doing that when I was a baby during the great 1985 earthquake, as I was staring at the light bulb in the ceiling while it was moving as a pendulum with simple harmonic motion.

My mother, not wanting to live with my grandmother and aunts anymore, wanted to have a house for her, for my father, and for me. Therefore, Lorenza allowed my mother to build a new house in her backyard. While this new house was being built, builders were always working there. Therefore, I named the building Casa de los Albañiles (House of the Builders) when it was completed in 1987. My parents moved to the new house as soon as it was built. However, I did not move until 1996.

I know that before suffering from nephritis, I lived a happy life. An extremely happy life. That finished when I traveled to Morelia, Michoacán with my parents when I was three years old. I disliked sleeping in a place that was not my house. After that, I became ill with nephritis. I do not know if our trip was related in any way. I became a patient of Dr. Octavio Martínez Natera because my uncle Jorge Reyes Mejía told my parents he was able to help me. Dr. Martínez Natera was a distinguished army surgeon who was a friend of my uncle. His doctor's office was in a private pediatric clinic in Lomas de Chapultepec, Miguel Hidalgo (19.42351664912192, -99.20585775763307).

I was hospitalized, and almost died in Hospital Infantil Privado, a hospital that is now known as Hospital Star Médica Hip. It is in Benito Juárez, Mexico City (19.396219340255243, -99.17925831266925). I remember the night that I spent in the hospital as if it were a nightmare. My oldest memories are like dreams or nightmares. Karl Marx (1843) wrote an essay titled "Zur Kritik der Hegelschen Rechtsphilosophie." In such an essay, he stated that: "Religious suffering is, at one and the same time, the expression of real suffering and a protest against real suffering. Religion is the sigh of the oppressed creature, the heart of a heartless world, and the soul of soulless conditions. It is the opium of the people. The abolition of religion as the illusory happiness of the people is the demand for their real happiness." Marxists are, therefore, atheists.

***Ursus maritimus* Phipps, 1774 (Carnivora: Ursidae)**

Illustration made by Javier Montesinos Medrano. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 854.**

That is why my mother was an atheist. When I was close to death, my mother was so anxious that she prayed to God YHWH (Allah) and to the Virgin St. Mary of Guadalupe asking them to save my life. I did not die and recovered my health. My mother stopped being a Marxist communist forever.

I also have good memories of my childhood. My mother lent me old eyeglasses that belonged to my uncle Jorge Reyes Mejía so I could play with them. I pretended that I was him and I wore the eyeglasses while scribbling in a notebook. I then used to say that I was writing medical prescriptions. I was not writing anything as I did not know yet how to write.

One day, my uncle Jorge Reyes Mejía saw me playing that I was him, so he lent me his stethoscope so I could listen inside his body, his respiration, his heartbeats, and his gastrointestinal peristalsis. He then told me what all such noises meant. Every time my uncle Jorge Reyes Mejía came from Tuxpan, he brought gifts for me. These gifts were always books on the biology of non-human animals. In that way, he wanted to motivate me to learn the ecological stuff he loved. I was not able to read at that time, but I asked my aunts to read the books for me so I could listen to their contents.

As my parents noticed that I was interested in zoology, we started to visit the Zoológico de Chapultepec, the main zoo in Mexico City. My favorite animal species in the zoo was the polar bear (*Ursus maritimus*). I went once a week just to see the polar bears! Other noteworthy species were the Asian elephant (*Elephas maximus*), the tiger (*Panthera tigris*), the giraffe (*Giraffa camelopardalis*), and the western gorilla (*Gorilla gorilla*). My parents also visited the Museo de Historia Natural de la Ciudad de México, the natural history museum, with me. I loved such places, especially the natural history museum. It exhibited objects related to interesting topics, such as non-avian dinosaurs and human evolution (19.409769659750324, -99.20150103993542). In such a museum, I was always amazed by the taxidermy mounts of monotremes (*Ornithorhynchus anatinus* & *Tachyglossus aculeatus*) and by the life-size skeleton model of the sauropod dinosaur *Diplodocus carnegii*. I also loved the dome that depicted the constellations, the interactive map of important minerals, and the diorama of Mesozoic biodiversity (to learn more about this museum, please see Appendix C)

Thanks to that museum and to the books that my uncle Jorge Reyes Mejía gave to me, I was extremely interested in Mesozoic non-avian dinosaurs and other species of reptiles that lived at that time. I really loved the Mesozoic fauna depicted in the movie "Fantasia" (1940), an old Disney art film that I watched at home frequently. As a result of my enthusiasm for fossils, my

parents visited with me the Museo del Instituto de Geología de la UNAM, an earth sciences museum. The architecture and the displays of this museum are elegant, palatial, and sublime. It is the most regal museum in Mexico. There, I saw several skeletons and fossils of extinct animals as well as natural specimens of gorgeous mineral crystals. Some of those minerals were radioactive ores of thorium and uranium!

My favorite exhibits of this museum are the shell of the *Glyptotherium mexicanum*, the skull of the *Deinotherium giganteum*, the skeleton of the *Stenopterygius quadriscissus*, and the stained glass by Franz Xaver Zettler titled "Interior de la Mina de Wieliczka."

When I was a child, I also loved some works of art in the Zoológico de Chapultepec. These works of art were sculptures of non-human animals made by expert master gardeners by pruning shrubs (*Buxus sempervirens*). This art is known as topiary. These topiary sculptures were found in the side of the zoo that is in the avenue known as Avenida Paseo de la Reforma.

In the zoo, there was also a stone sculpture that depicted a huge walrus (*Odobenus rosmarus*) standing over an enormous rock in the middle of a pond. The zoomorphic shrubs were killed, and the walrus sculpture was removed when atrocious María Elena Hoyo was the director of the zoo, due to her extreme ignorance of the cultural value and importance of art. Another attraction of the park known as Bosque de Chapultepec was the Centro de Convivencia Infantil. In that place, there was a machine that moved when an operator switched it on and played with it. Such a machine looked like King Kong, an ape-looking kaiju who was the main character of the film "King Kong" (1933). Nowadays, in the place where such a machine was found, there is a botanical garden.

I also visited with my parents the extremely famous Museo Nacional de Antropología, the anthropology museum. (19.426474073985748, -99.18623173975708). My favorite exhibition of the museum was the pond with organisms that were alive such as waterlilies (*Nymphaea caerulea*), papyri (*Cyperus papyrus*), silversides (*Chirostoma jordani*), and dwarf crayfish (*Cambarellus montezumae*). Nowadays, this pond has a larger number of species of organisms. Another exciting attraction was an exquisite giant mural painting of the megafauna that lived during the Pliocene and the Pleistocene in the territory that is now Mexico. The title of that painting is "Fauna Pleistocénica" and it was made by Iker Larrauri Prado (1964). There was another work of art that was breathtaking. It was an abstract, colorful yarn painting titled "La Visión de Tatutsi Xuweri Timaiweme." It was made by José Benítez Sánchez (1980). Not only 20th-century art was amazing. I also liked some pre-Columbian art pieces

such as a sculpture of a monster known as ahuizotl (**page 873**) and a sculpture that depicts a sand flea (*Tunga penetrans*). I also loved the ancient masks made of jade ($Na(Al,Fe^{3+})Si_2O_6$).

I often went with my parents to a city park known as Parque Xicoténcatl, Coyoacán. I also used to go with them to Downtown Coyoacán to feed the pigeons (*Columba livia*) with maize seeds (*Zea mays*). We also used to go to a park known as Viveros de Coyoacán to feed the squirrels (*Sciurus aureogaster*) with peanuts (*Arachis hypogaea*).

Many years before I was born, my grandfather Tomás decided to break up with my grandmother Lorenza. As a traditional Catholic, he never divorced, as it is considered a sin. What he did was to build a house in Cuernavaca, Morelos to go to live far away from my grandmother and to have love affairs there with other women. He had a vast garden. I loved going to Cuernavaca because my grandfather always caught arthropods to show them to me alive. He used to show me Opiliones, scorpions, vinegarroons, spiders, centipedes, millipedes, woodlice, dragonflies, earwigs, crickets, grasshoppers, stick insects, mantises, cockroaches, triozids, coccids, cicadas, stink bugs, leaf-footed bugs, seed bugs, wasps, ants, bees, beetles, moths, butterflies, crane flies, and flies.

In Cuernavaca I liked to go with my parents to a park known as Jardín Borda. I used to go there to feed the domestic ducks (*Cairina moschata*) with crackers.

My grandmother Lorenza loved plants. In the garden of her Mexico City home that could be seen from the street, she used to cultivate *Xanthosoma robustum*, *Cissus tiliacea*, and *Rosa* spp. Inside the house, she always had flower vases with inflorescences of *Gladiolus* x *gandavensis*, *Agave amica*, *Limonium sinuatum*, *Gypsophila paniculata*, *Dianthus caryophyllus*, and *Chrysanthemum* x *morifolium*. However, she did not like trees because she saw how lightning struck a tree (*Pinus montezumae*) quite close to her when she was a child. As a result, the tree was killed. Therefore, she was afraid of trees because according to her, they attracted lightning. As a result of building Casa de los Albañiles, the remaining part of Lorenza's backyard was full of bricks and gravel. When all such building materials were removed, we went to a plant market known as Mercado de Flores y Plantas Madreselva. This place is in a park known as Bosque de Nativitas, Xochimilco. We went to buy grass (*Cenchrus clandestinus*) for a lawn and plants with pretty inflorescences (*Gazania rigens*), wanting to plant them in the remaining part of the backyard. In that trip to the plant market, I saw a vendor that was selling plants belonging to the families Asphodelaceae, Crassulaceae, and Cactaceae. I asked my parents to buy me a *Sedum* x *rubrotinctum* and an *Opuntia microdasys*. These plants were inside aluminum cans for soda that were used as pots. My grandmother Lorenza

transplanted these plants into real pots and told me how to take care of them. Since then, I have loved succulent plants, and I have become a collector of this type of plant. My grandmother always helped me to take care of them. (Please see the glossary to know what the letter "x" means in scientific names.)

I really liked a university botanical garden known as Jardín Botánico del Instituto de Biología de la UNAM (19.31891698734368, -99.1940542355132). The attraction that I fancied most in this garden was its succulent plant collection. According to me at that time, there was no other place with more succulent plants than that botanical garden. The succulents in said garden were set among the rocks of Pedregal de San Ángel. One of the founders of this garden was Professor Helia Bravo, who was an expert in cacti, so succulents were the highlight of the exhibition. The professor was able to share her love for succulents with all visitors through the garden she helped to design. In the botanical garden, there were also ponds inhabited by frogs (*Lithobates montezumae*). There was also a greenhouse named Invernadero Manuel Ruiz Oronoz. This greenhouse has a warm and humid climate to keep tropical plants. The best plant in this greenhouse was the cactus *Selenicereus grandiflorus* because of its outstanding flowers. It became my favorite plant.

In September 1988, there was a hurricane named Gilbert. It was the most disastrous hurricane in modern Mexico's history. Fortunately, it did not hit Mexico City.

Every 9th of December, my birthday was celebrated. This is how such a celebration took place: My parents bought me a strawberry (*Fragaria* x *ananassa*) cake. That was my favorite flavor! Then the same number of candles as the years I lived after coming out of my mother's vagina were placed over the cake. That was not the true time I had existed as I obviously existed before the 9th of December 1984 as a zygote, then as an embryo, and then as a fetus. All the candles were lit. Then, a traditional folk song in Spanish was sung. This is the translated song:
"Today, that you are one year older and that you are happy with your parents, behave well throughout the year, and blow out the candles by blowing on the cake."

Then I had to blow out the candles. After that, the cake was eaten by me and by all my family. The cakes were always bought in the Aranzazu patisserie of Downtown Coyoacán. One could commission a cake by choosing how it would look like. In their catalog, one could choose cakes with the shapes of all sorts of beasts! In the patisserie, there were cages containing island canaries (*Serinus canaria*)! The cakes that were bought for me were made of vanilla (*Vanilla planifolia*), flour from wheat (*Triticum aestivum*), starch from maize (*Zea mays*), sucrose from sugarcane (*Saccharum officinarum*), strawberries

(*Fragaria* x *ananassa*), yeast (*Saccharomyces cerevisiae*), milk that comes from cows (*Bos taurus* or *Bos indicus*), and eggs lain by chickens (*Gallus gallus*). (To know why the scientific name of strawberries has an "x" in the middle, please see the glossary.)

When I was four years old, I went with my parents to Guanajuato City. The Spanish colonial city had magnificent architecture. I can remember that I was highly impressed by Calle Subterránea as soon as I arrived in the city, as it is a gigantic dark tunnel. I had never seen one before. My parents bought charamuscas. Charamuscas are candies that people dress up with tiny clothes made of fabric and hats made of fibers, so they look like charros and chinas poblanas. Charros and chinas poblanas are people dressed in Mexican Criollo folk costumes. Charamuscas are made of sucrose from sugarcane (*Saccharum officinarum*), pecans (*Carya illinoinensis*), and butter made from milk that comes from cows (*Bos taurus* or *Bos indicus*).

In Guanajuato City, we also visited the majestic Teatro Juárez theater that was seen across the street from the hotel where we spent the night. Unfortunately, we spent the night in a room that was just above the exact place on the street with an underground entrance to the tunnel known as Calle Subterránea. Thus, we listened for the whole night to the echo produced by the cars and drunk passersby who were walking in Calle Subterránea. It was not a quiet night...

The next day, my parents and I visited the museum of the mummies of Guanajuato—which are human corpses exhumated from the graveyard known as Panteón de Santa Paula. These corpses were exhibited to tourists in the graveyard museum (21.01994366840324, -101.26619637951028). Formerly, these corpses were kept in the graveyard ossuary chamber. However, they became a popular tourist attraction, so a museum was opened to exhibit them. In many graveyards, bodies are exhumed when the cemetery services contract expires. Nevertheless, the corpses exhumed from most graveyards are never shown to the public. However, as the mummies of Guanajuato still had skin, they were attractive for tourism. The reason is that they look more like living humans than skeletons, but not quite the same as living people. When one looks at something that looks almost human without looking the same as an average human, one feels more negative emotions than when looking at something that is less human-like. This aesthetic principle of modern culture is known as the "uncanny valley." It is not a scientific phenomenon, just a cultural bias. Hence, the mummies of Guanajuato look more repugnant than a mere skeleton. In addition, natural mummification generated grotesque grimaces on their leathery faces.

There is an ancient superstition that states that what provides a form to the human body is its soul. As these corpses still have a human form, people think that they are staring at corpses with souls. This would mean they have souls that have not yet been able to rest in peace. Thinking that mummies are undead is something enjoyable for viewers, like watching a horror film in a cinema theater. Apparently, people enjoy feeling the stress produced by fear. Looking at the mummies of Guanajuato was one of the most traumatic events that I have ever experienced. I was not ready to see dead human bodies in such a state. As a result, I became ill with "espanto" or "susto," a variant of post-traumatic stress disorder that includes psychogenic illnesses (hysteria).

From that moment on, I spent a lot of time thinking about death and its meaning. I knew that sooner or later, I was also going to die, and that overwhelmed me. At that time, I used to feel an emotion that was a mixture of sadness, fear, and anxiety. I started to have great depressive episodes. Guanajuato City would affect me so much that in my nightmares (that I would begin to have a year and a half later due to the stress caused by school), I frequently dreamed of places in Guanajuato City. The places that I most commonly saw in my nightmares were Calle Subterránea, Jardín de la Unión, and the fountain with frog (*Lithobates megapoda*) sculptures made of stone that was inside the hotel where I spent the night in Guanajuato City (21.01581584625495, -101.25327151814467). During the five years that followed the time when I started having nightmares, Guanajuato City would become the main stage of my nightmares.

The first kindergarten that I attended was named Jardín de Niños Gigio (19.342558262746987, -99.14996929789051). It had a carousel with seats that looked like an elephant (*Elephas maximus*), a horse (*Equus caballus*), a giraffe (*Giraffa camelopardalis*), and a roadrunner (*Geococcyx californianus*). Starting to study kindergarten was an extremely traumatic experience. The first day I arrived, I cried and shed tears because I was in a place that was unknown to me, where I knew no one.

Lucy, my first schoolteacher, commanded my classmates to psychologically torture me as a punishment for crying. I stopped going to that kindergarten, and my parents sent me to a different kindergarten. Lucy was quite stupid; when I attempted to talk to her about non-avian dinosaurs, she replied that such animals never existed and that they were mere cartoon characters for children. Jardín de Niños Gigio does not exist anymore. In that place now, there is a clinic known as Instituto Médico Quirúrgico Savata.

The new kindergarten was named Jardín Montessori's (19.34417518551019, -99.15062355567807). The principal was Lily Moncada. The school logo was two swallows (*Hirundo rustica*). I had to wear a uniform like all the other students. The first days that I attended the new kindergarten; I

used to vomit in the mornings before leaving my house to go to the kindergarten. I threw up because I was extremely afraid of kindergarten. My new schoolteacher, Lily Moncada, was not cruel. However, I was still suffering from the post-traumatic stress disorder caused by attending the previous kindergarten.

As I also suffered some symptoms of the espanto or susto that I contracted in Guanajuato City, my life was miserable. When I started studying kindergarten, I was four years old. At that time, I already knew how to read and write thanks to the zoology books that my uncle Jorge Reyes Mejía bought for me. My best friends in kindergarten were Damián and Valeria. Every morning, Valeria did not want to go inside the kindergarten unless I arrived. The kindergarten had a garden with a fountain in the middle of it. Even if Lily was not a bad person, she was a bit ignorant, as she claimed that snakes do not have bones and that Cozumel Island, Quintana Roo, Mexico, was Cancún, Quintana Roo.

The place where I studied kindergarten was a house in the middle of the city, but during times of old, it was a spring in the middle of Aztec chinampas. This spring was known as Acuecuexco and produced plenty of water (H_2O) for Lake Texcoco. Aztecs considered it a sacred place where religious rituals were performed. When my mother was a kid, she was still able to see the Aztec pyramid that was found between an avenue known as América, a street known as Calle Antigua Taxqueña, and a street known as Pennsylvania. You will not see it anymore because it was destroyed to build a modern skyscraper. According to an old legend, an Aztec emperor wanted to build an aqueduct from Acuecuexco to the Aztec capital city. Tzutzumatzin, the governor of Coyoacán, where the spring was found, was opposed to the project. The emperor sentenced Tzutzumatzin to death. When the police officers went to arrest him, they did not find him inside his office. They instead found a golden eagle (*Aquila chrysaetos*) because Tzutzumatzin was a nagual shapeshifter, and he transformed himself into a bird. When they attempted to arrest him again, he transformed himself into a scary jaguar (*Panthera onca*). The policemen ran away scared. The third time they attempted to arrest him; he transformed himself into a dragon that threw fire at them. As the emperor realized that it was impossible to arrest him, he said he would destroy Coyoacán with the aid of the imperial army if Tzutzumatzin would not surrender. Before being killed, Tzutzumatzin prophesized that the water from the spring would flood Mexico City. The emperor built his aqueduct, but Tzutzumatzin's prophecy came true, and plenty of Aztecs died. The emperor also died at that time because of an accident. The Spaniards substituted the ancient pagan Aztec temple of Acuecuexco with a small Catholic church that does not exist anymore.

Panteón de Santa Paula, Guanajuato City, Guanajuato, Mexico

Illustration made by Jo Herbert. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 854.**

It is now a traditional publisher of books known as Editorial Sexto Piso. "Sexto piso" means "sixth floor" in Spanish. Paradoxically, the building of Editorial Sexto Piso does not have six or more floors!

The first time I got a gift that was not given to me by one of my relatives was when Valeria (1989) gave me a traditional art drawing that she made on paper. This portrait somewhat reminds me of a smiley. Yet, the skin of the person in the portrait is not yellow. Moreover, the subject is stylized in a way that makes this person look as if suffering from orbital hypertelorism.

At the end of the 20th century, the Union of Soviet Socialist Republics had hegemonic control over plenty of countries. These vassal nation-states were Marxist and were oppressed by dictatorships. In 1989, many of these countries, including East Germany, Czechoslovakia, and Poland, became independent. They got rid of socialism and became democratic nations. This showed socialism was being weakened.

At that time, I built a small diorama in my house. I did it on my own initiative; no one asked me to do it. The diorama had small models of trees and extinct Mesozoic animals. I did that by attempting to emulate the diorama of non-avian dinosaurs in the Museo de Historia Natural de la Ciudad de México, my favorite museum. I really loved the diorama in the museum. Unfortunately, in modern times, that diorama has been removed from the museum, and it does not exist anymore (see Appendix C for a description of my favorite museum during my childhood).

On the last day of the academic year, we had our graduation party in Reino Aventura, an amusement park that is now known as Six Flags México. It is in a park known as Bosque de Tlalpan, Tlalpan, Mexico City. Jardín Montessori's does not exist anymore. Today it is a private house.

That year, the Mexican government created the Instituto Federal Electoral (IFE), a federal executive department in charge of being an impartial arbitrator of elections. This was needed because the dominant political party known as Partido Revolucionario Institucional (PRI) committed fraud to win the presidential election. Two years before, PRI awarded the presidency to their own candidate Carlos Salinas de Gortari, even though most Mexican citizens voted for Cuauhtémoc Cárdenas, the presidential candidate of the political party known as Partido Auténtico de la Revolución Mexicana (PARM). Thus, people wanted a fair electoral system.

At that time, I visited the archeological ruins of Teotihuacan, State of Mexico. It has two majestic and huge pyramids known as the Pyramid of the Sun and the Pyramid of the Moon. When I was there, I saw a twister for the first time. All peddlers that were selling stuff at the archeological site became

terrified by the whirlwind. They started to move their right hands to make the sign of the cross with them. This sign of the cross is a religious mudra that represents the Holy Cross where Jesus died. The peddlers performed this religious ritual because they thought the whirlwind was an unclean spirit, and they attempted to exorcize it.

I went with my parents and my uncle Jorge Reyes Mejía to visit his home in Tuxpan, Veracruz, for the first time. On the highway, I saw Presa el Tejocotal, a reservoir in the State of Hidalgo. My uncle Jorge asked me if I was impressed by it, and I told him that I was not. He asked me the same regarding the Tuxpan River, and I told him that I was not either. He asked me the same regarding the sea. The sea truly impressed me. I had never seen such a large amount of water. My uncle Jorge Reyes Mejía showed me the wild birds of his backyard, of the beach, and of the mangroves. He showed me a wild bird, and then he showed me the same species in his books so I could know the name of the species and some ecological data regarding it. He showed me some fascinating species of birds such as the fulvous whistling-duck (*Dendrocygna bicolor*), the white-winged dove (*Zenaida asiatica*), the laughing gull (*Leucophaeus atricilla*), the magnificent frigatebird (*Fregata magnificens*), the Neotropic cormorant (*Nannopterum brasilianum*), the white ibis (*Eudocimus albus*), the little blue heron (*Egretta caerulea*), the brown pelican (*Pelecanus occidentalis*), and the golden-fronted woodpecker (*Melanerpes aurifrons*). Since then, I have become a birdwatcher. Every time I saw a new bird species, I drew it on paper, painted it with colored pencils, and looked for it in the books that my uncle Jorge Reyes Mejía gave to me as gifts. If I was not able to identify the species, my uncle told me what it was when he visited Mexico City.

The empirical study of birds in Western civilization started with Aristotle and Pliny the Elder. In Roman Egypt, there was a tradition known as Hermeticism. The aim of this philosophy was to acquire divinity through understanding the mind of God YHWH by studying His creation, the Universe that we inhabit. Hermetic influence on medieval Islam and Christianity led imams and priests to study nature to be closer to their Deity, the so-called natural theology. Birds were part of the study of natural theology. During the European Renaissance and Enlightenment, plenty of naturalists started to describe and study organisms. They were motivated by scientific breakthroughs and the discovery of new lands.

Some of these researchers, such as Gilbert White, started to watch wild living birds without catching them or collecting them. This allowed them to study their ecology and behavior. The writings of White enticed plenty of amateur people to watch birds. As a result of this, Thomas Bewick wrote the

first bird field guide. Afterward, Ralph Waldo Emerson developed a mystical version of Christian natural theology known as transcendentalism. Many of his followers wanted to live in harmony with nature, the creation of God YHWH. The theory of evolution by means of natural selection changed people's minds, so creationism was challenged. However, they kept loving nature. Therefore, they wanted to protect the natural environment.

Modern amateur birdwatching was eventually developed out of the Audubon Christmas bird counts planned by Frank Chapman. In this type of birding, a census of all species and individuals is made. It is also characterized by writing field notes or photographs to gather more data. Rachel Carson transformed birdwatching into a political tool. For her, it was a pastime whose aim was to indoctrinate people with environmental consciousness, so it could transform citizens into activists that would be ready to protect the environment financially or in political elections. The individual lists of each birding trip can be used to compile larger lists until reaching a master list known as the "life list." This is a list of all the birds that a birder has seen. The nouns "life bird" or "lifer" are applied to the bird that is the first individual that belongs to a species that a birder has never previously seen.

In the Middle East, there were troubles. Iraq invaded Kuwait to seize its petroleum reserves. Iraq aimed to become richer through this military operation. On Thursday, the 2nd of August 1990, the American government decided to attack Iraq. That would prevent Iraq from becoming a powerful nation-state that could control international petroleum prices. This war was known as the Persian Gulf War. Many soldiers and officers who returned to the United States of America after having served in the war became ill with a disease known as the Gulf War Syndrome. At that time, the origin of this disease was a mystery, as veterans from other wars did not develop it. After the Persian Gulf War, Americans kept some troops stationed in Saudi Arabia in case there was another war against Iraq. This was known as the Operation Southern Watch.

When my aunt Yolanda worked as a schoolteacher, she had a colleague who later became her lover. The name of that former lover was José María Domínguez. In 1990, he worked in an elementary school for children. Lily's school was only a kindergarten, so my parents sent me to study elementary school in the school where Domínguez worked. That school was in Santa María Tepepan, Xochimilco. At that time, Santa María Tepepan was in the countryside. Farmers cultivated maize (*Zea mays*), and bulls and cows (*Bos taurus*) spent the whole day grazing in the pastures. In modern times, this place is not in the countryside anymore. There are just houses,

tall buildings, streets, and avenues full of cars. The school where Domínguez worked was named Escuela Activa Ermilo Abreu Gómez (19.269592432474955, -99.13976415954612). The principal was Amira Ayube Alcalá. The school logo was a hand of a Maya God sowing seeds (*Zea mays*). This image comes from "Madrid Codex," an ancient Maya book. I guess it was chosen because "Madrid Codex" is a Yucatec Maya document, and the school was named after a modern Mestizo author from Yucatán who sometimes wrote about the Indigenous descendants of the ancient Mayas.

After the Spanish Civil War, Francisco Franco exiled several communist politicians. When they arrived in Mexico, they attempted to change Mexican society by opening Freinet pedagogy schools to educate children with communist political ideas. Célestin Freinet based his pedagogy on Marxism, so his school system was loved by far-left politicians. Augusto Pinochet carried on a coup d'état against the Marxist government of Chile. As a result of this, several socialist exiles arrived in Mexico. These political refugees sent their children to Mexican Freinet pedagogy schools so their children could be indoctrinated with the same political ideas that their parents held. Escuela Activa Ermilo Abreu Gómez was one such school. It was a bizarre school, as it had a printing press, a weather station, and a farm plot where carrots (*Daucus carota*) were cultivated. It was also weird that in every classroom, there was a place named "El Rincón Vivo." In this area of the classroom, there were living plants of various species and turtles (*Trachemys scripta*). The students were also not required to wear any uniform.

In first grade, my schoolteacher was a cruel and evil woman, Madame Klahr. She loved to scare us with stories of psychopathic killers and supernatural horrors such as undead people. She claimed that in the maize cropland behind the school, there was a madman who was a serial killer who loved murdering children by stabbing them. Furthermore, to teach us mathematics, she drew people on her chalkboard and if we did not answer with a correct arithmetic result, she started to torture the people of her drawings until killing them by hanging or burning them alive. That is why I started to have horrible nightmares. The stories of Madame Klahr might have been the origin of the nightmares. These nightmares were highly repetitive. The main theme of these nightmares was ghosts and sinister creatures that dwelt in dark places. These beings were sometimes in my bedroom during nighttime while I was in bed. In my nightmares, the wraiths were threatening beings.

I learned how to pray to God YHWH, and I prayed a lot during those nights due to my fears. Not only were my nights miserable, but my symptoms of the variant of post-traumatic stress disorder known as espanto

or susto increased during the daytime. Such symptoms led to chronic melancholy. Part of my symptoms included severe nightmares. I interpreted my hallucinations during sleep as direct perceptions of the real world. That is why I was so afraid of my nightmares—because I did not think they were fantasies that I imagined while I was asleep, but perceptions of objective reality. The ghosts that I dreamed of were not the same as the ghostly woman that the domestic workers Helena and Victoria saw when they slept in the bedroom of the ground floor before I was born. The difference was that I saw the wraiths in my nightmares, but they saw La Llorona when they were fully awake.

As in all Mexican elementary schools, there was a military-style ceremony every Monday morning. In this ceremony we sang a nationalist song, the "Toque de Bandera" by Pío Manzanares and Xóchitl Palomino (1930). While we were singing, several students made a procession that publicly displayed the Mexican flag. One kid held a small flagpole with the Mexican flag, and the other children escorted the standard-bearer. After this, we sang the national anthem of Mexico, the "Himno Nacional Mexicano" by Francisco González Bocanegra and Jaime Nunó (1854). It is a nefarious song that teaches children that violence and aggression are good values. The lyrics state that war should be carried out to protect the foul and corrupt government of Mexico and its economic interests.

The Mexican flag has three colors. Now, I shall explain what these colors meant according to Agustín de Iturbide, the first Mexican emperor. He was the first head of state to display these colors in the Mexican flag. The first color is green, which means independence from Spain. The second color is white; it means the Catholic faith. The third color is red, meaning the union between European and New World peoples. Iturbide (1821) wrote this in his "Plan de Iguala." The meaning of these colors was later changed, but this is the original meaning. In the middle of the flag is Mexico's coat of arms. The coat of arms depicts a golden eagle (*Aquila chrysaetos*) holding a rattlesnake (*Crotalus molossus*) in its beak. The bird is standing on a prickly pear cactus (*Opuntia streptacantha*) that is above Lake Texcoco. This image is surrounded by two branches: a laurel branch (*Laurus nobilis*) and an oak branch (*Quercus robur*). These last two species were not native to Lake Texcoco. However, they were holy in the Graeco-Roman Olympian religion, as they had esoteric meanings for the believers of such ancient faith. These meanings were supposedly known by any 19th-century educated person. The reason was that, at that time, European colonial hegemony made European high culture compulsory knowledge for educated people all over the world. This European high

culture included the Renaissance obsession with anything that belonged to the Graeco-Roman civilization. The eagle standing on the prickly pear cactus is the one in the tale about Copil, his mother, and Huitzilopochtli.

Even if we were in a communist school, we were never taught communist ideology, as we were still very young. However, the quality of education was bad and deficient. This was not an accident, but on purpose. The aim of this was that we would grow up being ignorant people, and that is very useful for political indoctrination. Ignorant people never question their political leaders or their hegemonic ideology. The music teacher made us sing and learn a horrible and depressing song about death. To listen to it, please listen to: "Nicandro Castillo - El Cantador" (1973).

Madame Klahr was a dreadful math teacher. This had bad effects in future years, as I did not acquire good math skills. Some of my classmates at that time were Sebastián, Daniel Huerta, Gerardo Iñiguez, Bárbara Sol, Anat Morales, Ana Laura, and Paloma. At that time, I contracted chickenpox from my classmates. The reason was that at that time, there were no commercially available vaccines against varicella zoster virus (*Human alphaherpesvirus 3*).

On Christmas 1990, my parents gave me my first binoculars as a gift. They were Hansa 7x50 ZCF binoculars. They were huge for me. They are not that big, but they were heavy for me at that time, as I was a six-year-old child. That Christmas, I went with my parents to Lago Nabor Carrillo, a reservoir in Texcoco, State of Mexico, to do some birdwatching. I was surprised by the large numbers of marvelous migratory and resident water birds. I saw American white pelicans (*Pelecanus erythrorhynchos*). I also saw several species of ducks, such as *Spatula clypeata*, *Mareca americana*, and *Anas acuta*. When I was in the reservoir, I saw Mexican ducks (*Anas diazi*) for the first time. Since that day, it has become my favorite animal species. I did not like polar bears (*Ursus maritimus*) that much anymore. The polar bears at the Zoológico de Chapultepec were frequently displaying aggression toward each other, so I decided to change my favorite animal. Furthermore, my new favorite animal was more suited to birding, my new hobby.

In 1980, dictator Tito died. He was the communist leader of Yugoslavia. His death and the weakening of the Union of Soviet Socialist Republics slowly weakened Yugoslav socialism. As a result, all Yugoslav ethnic groups started to feel a great desire to govern themselves by becoming independent. A group of people wanted to become independent from Yugoslavia and referred to themselves as citizens of the Serbian Autonomous Oblast of Krajina. They took control of Plitvička Jezera National Park. On Easter Sunday, 1991, the

Croatian police fought against them and recaptured the national park for Croatia, another region that wanted independence from Yugoslavia. That was the beginning of the Yugoslav Wars, which lasted for a whole decade and radically changed the political map of Europe.

The first time I flew by airplane, I went to Mérida, Yucatán, Mexico. During such a holiday, I kept watching birds. I saw American flamingoes (*Phoenicopterus ruber*) in Celestún, Yucatán. In the same place, I also saw how an osprey (*Pandion haliaetus*) caught a fish (*Mugil curema*). In Balamcanché Cave, Yucatán, I saw a turquoise-browed motmot (*Eumomota superciliosa*), a breathtaking bird! During my first Yucatán holidays, I was also impressed by the ominous swarms of locusts (*Schistocerca piceifrons*) that were a threat to agriculture at that time. I also saw the most fearsome thunderstorm that I have seen in all my life. This storm happened when I was in Sisal, Yucatán. During that thunderstorm, lightning fell 10 m away from the rented car where I was with my family. Due to Hurricane Gilbert, at that time roughly half of all mangroves in Celestún and Sisal were just dead tree trunks and branches with no leaves. Nowadays they are full-grown forests. During the holidays, I also climbed the world-famous Chichen Itza pyramid, as all tourists were allowed to climb it at that time. Inside the temple, on top of the pyramid, I saw the Maya throne that looked like a jaguar *(Panthera onca*). Such a pyramid is amazing; if someone starts clapping, an echo is produced by the pyramid. The echo resembles the song of the resplendent quetzal (*Pharomachrus mocinno*). The architects who built such a structure were quite remarkable! During that time, unlike nowadays, all people from Yucatán wore Mestizo folk costumes.

Madame Klahr, my schoolteacher, was psychologically abusing me. Such harm, together with my susto or espanto illness that used to make me melancholic, triggered psychogenic diseases in my body. My immune system was very weak, so I became easily infected with bacteria such as *Streptococcus pyogenes*. I had greenish phlegm, coughing, and fever. Dr. Octavio Martínez Natera prescribed medicines that relieved my illnesses for a few days. Nevertheless, they always returned. One night, I woke up with asthma. Not being able to breathe was one of the worst events I have experienced. The green color of the phlegm was due to an enzyme expressed by neutrophiles. Neutrophiles are white blood cells of the immune system that fight against infectious agents. The enzyme is known as myeloperoxidase.

My father was almost never at home, as he was about to achieve his dream. His initial efforts allowed him to study at the prestigious university known as Universidad Nacional Autónoma de México. When he was there, he followed the second step in his

plan, so he met my mother, a wealthier woman, and married her. Thanks to his new social class and the support of my mother, he became a manager at Nacional de Cobre (Nacobre), one of the companies owned by Carlos Slim. Now that my father had lots of money, he was ready to "buy" true love. He would use his money to attract a woman with whom to live a happy life full of love. This woman would be my father's true love, not just a mere tool to become wealthy, as my mother was. My father suffered a lot while he was rejected by society for being poor. Afterward, he felt powerful and glorious when he was flattered and respected due to all the money that he attained by using my mother as a step to attain a higher social class. My mother helped him to earn such money by providing him with all the cultural capital and engineering advice to become a manager.

At that point in his life, my father believed that there was nothing better or more important than money. He believed anything could be bought with money, even true love. There was a woman that lived in poverty whose name was Nora. She wished to have lots of money and was a gold digger. She started to flirt with my father so he could fall in love with her. She planned to use my father to acquire a higher social class. She planned to get rid of my father as soon as she was wealthy. Then, she would marry a man that she would truly love. My father started to have sex with Nora and stopped visiting my mother and me.

It became popular to teach karate to children. That was thanks to the American franchise "The Karate Kid." Therefore, at that time, there were plenty of karate schools that taught martial arts to children. A young man whose name was Enríquez opened a karate dojo not far from my house (19.33944799368123, -99.14849434465877). My grandfather Tomás lived in Cuernavaca, Morelos. My uncle Jorge Reyes Mejía lived in Tuxpan, Veracruz. My father simply stopped spending time in my house, and my naïve mother did not suspect why. Therefore, I did not spend any time with an adult male. My mother was afraid that I spent all the time with adult women—she was so Freudian that she thought I could become gay from it.

Psychiatrist Sigmund Freud (1923) in "Das Ich und das Es" thought that boys need to identify with their fathers to develop a heterosexual cisgender identity. Freudian psychoanalysis is a pseudoscience, but it helps people as religions do, so it is fashionable. As Freud did not formulate his doctrine by means of controlled experiments or statistical surveys, his ideas may not be true. As my mother was highly homophobic, she decided to send me to learn karate under Enríquez, so I would identify with him. In this way, I would never become gay. According to my mother,

karate taught the stereotypical heterosexual masculinity of macho men who solve every issue by fighting with their fists. She thought that Enríquez was such a stereotypical macho man. People who believed in the violent macho stereotype thought that aggression is an essential part of manliness. They argued that there is evidence in nature that points to this conclusion. They supported this view in non-human animal behavior studies that showed that in mice (*Mus musculus*), chickens (*Gallus gallus*), and song sparrows (*Melospiza melodia*), the blood concentration of the hormone testosterone is directly proportional to the incidence of aggressive behaviors. However, feminist Raewyn Connell (1987) in "Gender and Power" thought that there can be also non-aggressive forms of masculinity. The unstated premise of this belief is of course John Locke's Tabula Rasa. This is the idea that human nature is molded with education. It was written by Locke (1689) in "An Essay Concerning Humane Understanding in Four Books." You can choose whether you want to believe true masculinity necessarily entails aggression or not.

Enríquez was 20 years old when I was six years old. He grew up in the 1980s, when Hollywood movies, television, and video games idealized all Chinese and Japanese martial arts. All fictitious brave heroes fought using such methods. Enríquez grew up thinking he would become a video game hero or something similar. After learning different martial arts under different teachers, he decided to learn Eastern tantric mysticism to acquire the supernatural powers of the videogame ninjas. To achieve such an aim, Enríquez spent a lot of time practicing deep meditation. He thought that would allow him to obtain magical abilities such as levitation, invisibility, and telekinesis.

All that effort was apparently useless! Enríquez was not able to attain miraculous powers even if he worked a lot for that during his whole teenage years. When he met me, he told me about the ninjas and their supernatural powers. I immediately believed in everything that Enríquez told me. I was suffering the tyranny of Madame Klahr, and the overwhelming sadness produced by the espanto or susto. Nightmares tormented me during the night, and respiratory illnesses tormented me during the whole day. I needed a miracle, and Enríquez was also looking for one. Enríquez thought I could be the person who could obtain the miraculous powers that he always wished to attain. I was 14 years younger than him, at only six, and as I had a long lifetime ahead, he could train me until I could share supernatural powers with him.

Not all the fees that Enríquez obtained from his dojo were his. He had to send a lot of money to the sports federation to which he belonged.

Jurisprudence

Enríquez was a seeker of ancient wisdom. His search was the result of his curiosity to know the way the universe works and the desire to have the ability to transhumanize the human individual. My path was different. I also loved knowledge, especially the biological knowledge that my uncle Jorge Reyes Mejía showed to me. However, my desire to obtain knowledge was not the factor that led me to follow Enríquez's path. The factor that allowed me to join Enríquez in his spiritual mission was living an extremely brutal life, as the first five years of life were atrocious. My whole life became my great foe, and I needed the weapons to fight against it. As Enríquez's wisdom was linked to martial arts and self-defense, I approached him looking for battle gear.

Enríquez's supernatural abilities would allow me to venture into the frontiers of the human condition. He was going to be a mystical explorer and an initiate who was going to experience perceptions and abilities that almost no human beings have experienced. I was very different. I was going to be a boy oppressed by life who, with the help of supernatural powers, was finally going to fight against both my enemies and the evils of the world. In a certain way, my uncle Jorge Reyes Mejía influenced me in a way that allowed me to embrace Enríquez's message. Enríquez believed that changing my life could be attainable by learning a doctrine. It was thanks to my uncle and his books that I loved learning. It was thanks to him that I was willing to follow a self-help path that would be intellectual in nature.

Attending kindergarten and elementary school were clearly harmful events in my life. They did not contribute good things to me. The only good thing about these baneful institutions was that they created in me the need to seek wisdom that would allow me to face them and survive their atrocities.

CHAPTER 4. *AMBYSTOMA ALTAMIRANI*

My grandfather, Tomás, was a devout Catholic, and he decided that it was time to baptize me in his religion. He submitted all the applications and documents that would allow me to be baptized in a church known as Parroquia de la Asunción de la Virgen Santa María, Ahuacatitlán, Cuernavaca. I would be eligible to be enrolled in such a church because my grandfather's Cuernavaca house was close to it. My uncle Jorge Reyes Mejía traveled from Tuxpan to Mexico City to become my christening godfather. My aunt Luisa would be my godmother. My father told us that he would drive the car so we could go from Mexico City to Cuernavaca so I could be baptized. However, Nora wanted to go out on a romantic date, so my father went to see Nora instead of driving the car. I was not able to go to my baptism appointment. As a result, I was never baptized in the Catholic Church.

The spirituality that was practiced by Enríquez was part of the new religious movements known as New Age spirituality. Now, I shall explain what this is. Emperor Akbar in 16th-century India considered that it was possible to unify the ideology of Islam, an Abrahamic religion, with Hinduism, a Dharmic religion. Afterward, Arthur Schopenhauer studied the texts of Buddhist philosophers despite being a European philosopher educated in the West. Some years later, Helena Blavatsky and James Frazer studied spiritual traditions from different cultures. They concluded that the ideas of different cultures were similar or even consistent. This conclusion generated a belief in a universal spirituality that very different religions have supposedly practiced throughout the centuries. This so-called "universal spirituality" described in the texts of 19th-century occultists ended up becoming a new religion that was totally different from all those previously existing. This religion is known as New Age spirituality.

The believers of this religion do not attend church services and do not have priests. They claim that they are not religious people. Instead, they say they are spiritual but not religious. Nonetheless, all their beliefs were plagiarized from religious traditions, and they were developed as religious ideas by ancient priests. So, in fact, they are religious people like anyone else but want to feel special or different; that is why they claim to be spiritual but not religious. New Agers believe in green politics; in that way, they claim they love Mother Earth. They also believe in a certain pseudoscience that is based on misunderstandings of quantum physics or thermodynamics. This pseudoscience is promoted by people who

***Ambystoma altamirani* Dugès, 1895 (Urodela: Ambystomatidae)**

Illustration made by Aslam Narváez. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 854.**

lack good mathematical skills, so they cannot understand physics. Nevertheless, these people claim to be experts on "energy." New Agers try to attract the "positive energy" of the Universe, as this is supposedly a source of good luck, and avoid the "negative energy," as this is supposedly a source of bad luck. They claim "negative energy" is also channeled in everyday life as fear, anger, and mental illness, and the "positive" is channeled as happiness, relaxation, and absence of pain.

Plagiarized forms of meditation or spiritual exercises that were obtained through cultural appropriation from other religions, such as yoga, are essential rituals of New Age religions. Meditation, yoga, and an obsession with happiness and the absence of stress are legacies of New Age spiritual guru Carl Jung, who was a psychiatrist. Most modern New Age believers suffer from high levels of neuroticism and very frequently suffer from mental illnesses; that is why they have so much need to decrease their anxiety through spiritual practices. Fortunately, Enríquez was neither neuroticistic nor a mentally ill guy. He thought that the New Age pseudoscientific "energy" was the same concept that the ancient Chinese referred to as "Qi" and the same concept that ancient Hindus named "Prana." It was through cultivating this that Enríquez planned to attain supernatural magical powers. On Saturday, the 29th of June 1991, Enríquez granted me the white belt.

My uncle Jorge Reyes Mejía was an amateur aquarist when he lived in Mexico City, and my mother was a kid. He had a huge aquarium inside the house. It was inhabited by fishes and even a salamander species known as *Ambystoma altamirani*. My uncle's fishes included species such as the famous zebrafish (*Danio rerio*), one of the most popular model organisms used in biology. He also kept other species, such as the neon tetra (*Paracheirodon innesi*), the freshwater angelfish (*Pterophyllum scalare*), the Mesa silverside (*Chirostoma jordani*), the southern platyfish (*Xiphophorus maculatus*), the guppy (*Poecilia reticulata*), and the molly (*Poecilia sphenops*). He bought the fishes in markets all over Mexico City. He gathered clean water (H_2O) for his aquarium from the springs of Los Dínamos, La Magdalena Contreras, Mexico City. In the springs, he also gathered stones to embellish the aquarium. In the springs, he also collected the living salamanders. He took care of the salamanders until they almost finished their metamorphosis. In that way, he observed how the salamanders changed in appearance as they got older. When they almost became adults, my uncle returned them to the forest springs.

When I was born, that aquarium did not exist anymore. However, I found such stories fascinating, so my mother bought me a fish tank with an aquatic plant (*Elodea densa*) and some goldfish (*Carassius auratus*) that we bought in a market known

as Mercado de Coyoacán. After some years, only one of the goldfish survived, who lived for another six years.

Following the example of my uncle Jorge Reyes Mejía, I also went to Los Dínamos to look for stones to embellish my fish tank. I did not need to gather water from the springs, as water conditioners were already available in pet shops at the time I had my fish tank. Water conditioners are made of sodium thiosulfate ($Na_2O_3S_2$).

Los Dínamos is a beautiful canyon with *Abies* forests. When I was gathering the rocks in Los Dínamos, I found tiny crustaceans living in the water. These creatures are known as *Triops longicaudatus*. When I saw them, I thought they were identical to the eurypterids that lived during the Paleozoic Era. I knew that eurypterids existed because I read about them in the books that my uncle Jorge Reyes Mejía gave to me as gifts. Moreover, I had seen replicas of them in the Museo de Historia Natural de la Ciudad de México, the natural history museum (please read Appendix C to learn more about this museum). I wondered why people claimed that eurypterids were already extinct, as, according to me, they were abundant in Los Dínamos. I was obviously wrong, as the extinct eurypterids were members of the clade Chelicerata, not crustaceans like the animals I was seeing in Los Dínamos. When I went to Los Dínamos, mountain stream salamanders were scarce, so I did not see that species. What I did see was a red warbler (*Cardellina rubra*), a stunning bird.

On Thursday, the 11th of July 1991, there was a total solar eclipse in Mexico City. During the daytime, there was a brief lapse of darkness as if it were nighttime. That day, my pet chicken (*Gallus gallus*), named Zopilota, went to sleep as soon as everything became as dark as if it were nighttime. She immediately woke up when the solar eclipse finished.

Enríquez taught me plenty of stuff. He was the first person who showed me sacredness through physical and mental experiences, and not only through praying, as it was taught to me at home. He achieved this sacred state of being through his martial arts rituals. Furthermore, with the aid of meditation and hypnosis, he showed me the sacrality that was found within me. I became aware of such sacrality when he taught me multiple ways of perceiving reality. Following the example of the great master martial artists such as Bodhidharma and Bruce Lee, Enríquez was also a philosopher. He wanted his disciples to be obedient to all the commandments of their parents. He fostered living life with ethical guidelines, self-control, and avoiding violence—and used to say that he taught us how to run to flee any fight scenario. With his physical exercises, he taught us discipline and obedience to authority.

Regarding ethical matters, his main ideologues were Confucius and Laozi. His mystical practices were more inspired by tantric Buddhism. He did not like reading. He obtained all his knowledge orally from his martial arts mentors. He was more focused on practicing wisdom in everyday life than on studying wisdom. Enríquez was studying veterinary medicine at the prestigious university known as Universidad Nacional Autónoma de México. Thus, his students frequently showed their pet dogs (*Canis familiaris*) to him so he could meet them. When my parents got a puppy, I showed the puppy to Enríquez as it was a tradition among all his students. I told him that my puppy's name was Pepo. He told me that the name would not be suitable for the puppy, as she was female, not male, so Enríquez renamed her Pepa.

Enríquez always dreamed about becoming a breeder of attack dogs. However, his greatest love was martial arts. He wanted to have a high rank in a sports federation because he loved ranks and social approval. I truly admired him, so at that time, I desired to have the highest possible karate rank and all the secret tantric knowledge to obtain the supernatural powers that he said were attainable. Enríquez was a sports coach, a lawgiver who taught how to live one's life, an ethicist philosopher, a priest, and the principal of his school. He was like the scholarch philosophers of ancient Greece. Enríquez embellished his dojo with a huge sword. Karate does not involve the use of swords. Nonetheless, his dojo was part of a corporation that was also involved in teaching kendo and kobudō.

Kendo artists use swords made of bamboo (*Phyllostachys reticulata* or *Phyllostachys makinoi*). However, in past times, these bamboo swords were only employed during training. They were replaced by real metal swords when the practitioners of this martial art became proficient. For two months, I was the only student in Enríquez's class for children. During that time, all my classes were individual. My first classmates in Enríquez's dojo were two brothers named Alfredo de Jesús and José Alfredo. The brother who was more interested in Enríquez's spiritual teachings was Alfredo de Jesús. My first karate spar (jiyu kumite) was against Alfredo de Jesús, and I won. After that, I met other classmates who started to attend the lessons. Gabriel Escalante and the siblings Arturo Marín and Mariela were some of these students. Two students that lived on the same street as I were also attending the class. They were a boy named José Andrés Rivas, and a gal named Casandra. Casandra, José Andrés Rivas, and I knew the houses where we lived because we frequently visited each other.

I stopped attending Escuela Activa Ermilo Abreu Gómez, and I started attending a new school in second grade as my parents considered my former school to be too harmful for me. Escuela Activa Ermilo

Abreu Gómez does not exist anymore. Babylon, the sin city, the scarlet harlot, fell. Nowadays, the maize (*Zea mays*) cropland that, according to Madame Klahr, was haunted by the madman, does not exist anymore. Instead, there are now houses, and it is known as Fraccionamiento Villas Florentinas, Santa María Tepepan, Xochimilco.

My new elementary school was in Downtown Coyoacán (19.3533945797243, -99.16013103855268). Daniel Villagrán, its owner and principal, named the school after his own father, Félix Villagrán Escandón. Félix Villagrán did not achieve anything special or important during his lifetime, but his son loved him. The school logo was a coyote (*Canis latrans*). I guess such a species was chosen because the school was in Downtown Coyoacán. In Nahuatl, "coyohuacan" means "place where coyotes are owned." The building where such a school was founded was not built to be a school; it was originally a residential house. The neighborhood where this school was found was extremely ancient, as it had already existed during the time of the Aztec Empire and had plenty of houses built during the time of the Viceroyalty of New Spain.

To attend this school, I had to wear a uniform like all the other students. My first school day was on Monday, the 2nd of September 1991. In Escuela Félix Villagrán Escandón, I also had an evil schoolteacher, Blanca, but she was not as cruel as Madame Klahr. She loved to punish children in humiliating ways, such as taping their mouths with adhesive tape, forcing them to spend the whole class standing, and forcing them to sweep the classroom with a broomstick.

That year, I befriended Toño Barrera, a boy who was my classmate. I also met a boy named Rafael, who used to steal my lunch. I started to eat only a short baguette known as bolillo. It is a plain type of bread made only of flour from wheat (*Triticum aestivum*) baked with yeast (*Saccharomyces cerevisiae*). It is quite tasteless. Since that day, Rafael stopped stealing my food.

I stopped suffering from respiratory illnesses continuously, only during exam weeks. However, I still suffered from chronic sadness and anxiety due to espanto or susto. In my school, we had a class known as physical education that was not like the other classes. This class was not assessed while keeping us sitting inside a classroom. We used to go out of the school to a park known as Deportivo la Fragata (19.354830268214123, -99.16042183832198). This class involved doing physical exercise. To reach the park, we needed to go in couples. Every kid had to hold the hand of another kid while walking toward the park. Deportivo la Fragata had an enormous area with two soccer/football pitches and a basketball court.

122 m away from Deportivo la Fragata is the blue house (casa azul) that was formerly inhabited by famous painter Frida Kahlo. In the 1990s almost no one visited it. Now it is one of the most popular museums in Mexico City. When my family and I went sightseeing there, we were the only visitors in all the museum. My favorite paintings in that museum are "Naturaleza Muerta" (1942) and "Viva la Vida" (1954).

The Monday ceremony to honor the Mexican flag in my new school was the same as in my previous school. However, there was a huge difference with my former school. In this school, the teaching system was not a set of left-wing politics. It could be characterized as a set of right-wing politics. There was a great emphasis on conservative values based on the "Bible" and the Christian traditions that were developed after biblical times. Our teachers spent a lot of time talking about Jesus, the Christian worldview, and Christian ethics. We children were only interested in Christian mythology, and political matters were irrelevant to us. I think it is wrong to indoctrinate children with political ideas; it does not matter if they are right-wing or left-wing. Political ideas should be acquired with maturity throughout life. It is better to limit education to teaching the ethical values of natural law, as did Enríquez, the lawgiver.

During recess time, we liked to play stories for fun. Our schoolteachers did not know about this and did not care. It was a bit like theater plays but without any writer or rules, just like improvisational theater. We played that we were characters from famous Japanese franchises such as "Saint Seiya" or "Street Fighter." During these games, we ran all over the schoolyard. At other times, we played soccer/football.

Every morning, when my father drove the car with me inside so I could go to school, we saw a cleric who worked in the main Catholic church of Downtown Coyoacán, the Parroquia de San Juan Bautista. He practiced running as a sport. This Franciscan friar was nicknamed El Huarache Veloz and was well-known to everyone. That was because he went running to his job every morning while dressed up in his priestly uniform. He blessed all the people he found while running by making the sign of the cross with his right hand. He blessed us almost every morning.

Every 15th and 16th of September, there was a celebration. It was the anniversary of the beginning of the Mexican War of Independence. It was the time when the Catholic Church started armed conflicts against the Napoleonic government of Spain that ended up with the independence of New Spain, the North American colonial territory of the Spanish Empire. The current territory of Mexico was, of course, part of the former New Spain. Every 15th of September, the president of Mexico performs a ceremony known as El Grito de

Independencia. It emulates the call to arms made by Catholic priest Miguel Hidalgo in Dolores, Guanajuato, on the day the War of Independence started. Every 16th of September, there is a massive military parade. The military aircraft of the Mexican Air Force could be seen flying over my house's backyard during every September 16th military parade. In my home, such days were celebrated with a party involving music, traditional Mexican dishes, and watching El Grito de Independencia and the military parade on television. The dishes cooked by my aunts were quesadillas. Quesadillas are maize (*Zea mays*) tortillas that are folded in the middle and have cheese made of milk that comes from cows (*Bos taurus* or *Bos indicus*) inside of them. Optional extra ingredients can be added to quesadillas. These ingredients can be pumpkin flowers (*Cucurbita pepo*), Mexican-tea herbs (*Dysphania ambrosioides*), potatoes (*Solanum tuberosum*), corn smut (*Ustilago maydis*), or common mushrooms (*Agaricus bisporus*).

In my house, there was a balcony that could be seen from the street. My aunt Ana Reyes used to place a Mexican flag there to celebrate. In September each year, the government of Mexico displays independence lighting in many points of Mexico City. Independence lighting means placing large amounts of small light bulbs of different colors that together have the shape of national symbols and war heroes. My parents and I used to sightsee the Independence Lighting every September. To see the Independence Lighting, we used to go to Mexico City's Zócalo, Alameda Central, Avenida Paseo de la Reforma, and the Residencia Oficial de los Pinos.

All the celebrations of Mexican Independence are based on an 18th-century ideology known as nationalism. It was pioneered by Maximilien Robespierre and his political party, the Jacobins, during the French Revolution. This ideology allowed the Jacobins to brainwash the French people so they could fight to protect their country and the French Revolution from European monarchies. This ideology makes people loyal to their country, not to a king or to a religion. It is a fanatical cult engaged in worshipping nation-states or city-states. In this type of cult, it is considered that it is worth fighting in war or dying for one's country. It also makes people fight to protect national sovereignty. In a less violent form, it is displayed by discriminating against anything that is not from one's country. This means that anything from one's country has greater priority or importance than anything from foreign countries. Nationalism is extremely dangerous, as following this doctrine, people all over the world have committed monstrous atrocities.

My grandparents were proud of their son, who was my uncle Jorge Reyes Mejía. For them, he was akin to a national hero because

he was a member of the Mexican Army. Moreover, he once served in a military operation that involved battling drug traffickers in the Sierra Madre Occidental of Sinaloa and Durango, Mexico. Furthermore, he participated as a field surgeon, giving first aid to injured activists during the massacre that happened on Wednesday the 2nd of October 1968. In this massacre, young student protestors were killed in Tlaltelolco, Cuauhtémoc, Mexico City. Even though my grandparents felt so proud of my uncle because of his work in such events, my uncle Jorge Reyes Mejía did not enjoy such work. I was extremely proud of my uncle because he was a military officer. I used to respect the national symbols of Mexico and was proud to be Mexican because of him. All my national pride and my loyalty to Mexico were linked to the admiration I felt for my uncle Jorge since he was a member of the Mexican Army. I did not have any national pride or loyalty to Mexico because I felt truly honored to live in Mexico. Neither was it the result of loving President Carlos Salinas de Gortari or his government.

Every year, I used to go on holiday to Tuxpan with my parents. I did that several times a year. In fact, it was every time there was a holiday. My uncle Jorge Reyes Mejía lived in a house in the poor suburbs of east Tuxpan. Many of the military officers who once were his classmates lived in luxurious upper-class houses in Mexico City. They ended up being renowned physicians and generals of the Mexican Army. Jorge Reyes Mejía was not able to achieve such prestige. One of the reasons was that he charged extremely low fees for his medical services, and when he noticed that someone poor arrived at his private medical practice, he worked for free. He did that because he believed that the social function of a physician is to help people, not to get rich at the expense of the suffering of patients.

As he always fought against unfairness in the relationships between soldiers and officers, he was punished by never being awarded the rank of general. So many of his former classmates became generals, but he did not, and his wife and children quickly spent all the money that he gave to them. Esperanza spent it on her sexual partners, whom my uncle was indirectly paying with the money he gave to Esperanza. Furthermore, Esperanza's sexual partners spent all their time in my uncle's house, eating freely and having fun there. My uncle felt that he was a loser even though he lived by taking his ethical system to its logical conclusion. When he was young, he thought that life rewarded nice guys, but real life was not like that. He noticed that as he got older.

Jorge Reyes Mejía's eldest daughter was Georgina Reyes. She was a total impostor. She mistreated him because her mother, Esperanza, educated her to hate him. However, my aunts had an immense love

for Georgina Reyes. They loved her so much because she always faked her behavior in front of them. She always behaved like a loving daughter in front of my aunts. In addition to this, my aunts believed that she was the only biological daughter of Jorge Reyes Mejía. According to them, his other children were the biological offspring of Esperanza and other men. Esperanza, of course, told my uncle that they were his biological children.

Violeta Reyes, my uncle's second daughter, was as sexually promiscuous as her mother, Esperanza. Violeta Reyes wanted everyone to think she was a bad girl, so she was not a hypocrite. Therefore, she was greatly disliked by my aunts and by my mother. Violeta Reyes was jealous of her eldest sister because Violeta Reyes had a darker skin color. In 20th-century Mexico, there was still a colonial stigma from the time of the Viceroyalty of New Spain that involved skin color. During Spanish colonial times, slaves were Black people whose ancestors were African, while masters were lighter-skinned Spaniards. Therefore, skin color continued to be a source of racism in Mexican society. Violeta Reyes used to tell me that there was nothing more important in life than money. She also told me that she would marry a millionaire man and that she would live in a luxurious mansion. These events never happened...

Esperanza's youngest son was conceived when my uncle suffered from erectile dysfunction due to diabetes, and he did not have sex with Esperanza anymore. Therefore, he knew that he was not his biological child, but he decided to legally accept him as his own child because he was helpless.

My uncle suffered from type 2 diabetes mellitus. This is a disorder caused by an excess of blood glucose ($C_6H_{12}O_6$). The origin of this is that cells stop responding to insulin; this is known as insulin resistance. Insulin is the hormone that ensures that glucose can move from the exterior of a cell to the cytoplasm through a protein known as glucose transporter type 4 (GLUT4). Esperanza named her youngest son Jorge Reyes Anaya. He loved collecting yo-yos, tumblers, and collectible bottle caps. He was not as bad as his sisters, but he did not love his adoptive father either.

All the children of Jorge Reyes Mejía socially pressured him to eat such foods that harm diabetic people. They did that following the orders of Esperanza, their mother. Esperanza always left her house at midnight. She did that to go to the black masses. These were dark religious services performed by a denomination of an African diaspora religion. She learned from the practitioners of the dark magic of such religion how to use herbs with toxic alkaloids and would apply them to my uncle's food and drinks. This allowed her to keep abusing him and ensured that he

would not struggle against such mistreatment.

To spiritually empower her drugs, Esperanza performed a dark ritual that was part of her African diaspora religion. This ritual involved the burial of a doll inside the substrate of a plant pot. This doll was supposed to be my uncle Jorge Reyes Mejía. When I was visiting my uncle, Esperanza frequently ordered him to "shut up his mouth" when he wanted to speak. She also abused him by using name-calling for any trivial action he did that she considered wrong. I noticed all such abuse when I used to visit him in Tuxpan. My mother was also aware of that, but she could not avoid it. She had to tolerate such attitudes. If my mother would object to such domestic violence, Esperanza would not allow her to see my uncle anymore.

Jorge Reyes Mejía followed all the orders commanded by Esperanza. This was due to all the drugs that she was adding to his food and drink. I liked neither Esperanza nor her children. I even disliked Georgina Reyes, who was loved by my aunts. I did not like her because she also mistreated my uncle. As I was a child, Georgina Reyes did not need to fake her behavior in front of me, so I knew she was not a perfect daughter. Georgina Reyes was as greedy, cruel, and toxic as her sister, Violeta Reyes. The only difference was that Georgina Reyes was utterly hypocritical.

Violeta Reyes claimed that her favorite animal was the lethal snake that most often bites people in Tuxpan (*Bothrops asper*). On the other hand, Georgina Reyes was herself a snake, a venomous serpent. There was always rivalry between Georgina Reyes and me. She was born several years before I was born. Esperanza always told her that they were a poor family, while the Mexico City relatives of Jorge Reyes Mejía were rich. As Georgina Reyes was the spoiled brat overindulged by her paternal aunts, and all of them were childless, she thought that all the inheritance of her paternal grandparents and aunts would be inherited by her. Her good luck finished when I was born. I am the son of Marisol, her youngest paternal aunt. That is how I became her rival.

There was something good about visiting Tuxpan. The good thing was that I often visited Tamiahua Lagoon, Veracruz. In that lagoon, it was common to see wild dolphins (*Tursiops truncatus*). I also loved visiting the El Tajín archeological site, Veracruz. What I loved about such a place was its site museum because it contained a noteworthy natural history cabinet with plenty of native animal specimens preserved in 70% ethanol (C_2H_6O) jars. My favorite exhibits there were the terciopelo viper (*Bothrops asper*), the variable coral snake (*Micrurus diastema*), the speckled racer snake (*Drymobius margaritiferus*), the serrated casquehead iguana (*Laemanctus serratus*), the scorpions (*Centruroides gracilis*), the

tarantula (*Tliltocatl kahlenbergi*), and the centipedes (*Scolopendra sumichrasti*). Unfortunately, such a natural history cabinet does not exist anymore. In Tuxpan, there is also a museum about the Cuban Revolution because Che Guevara and Fidel Castro sailed from Tuxpan to attack the island and overthrow its government. That is how the evil dictatorship started. Indeed, as economist Milton Friedman observed, planned economies always generate more poverty and inequality than capitalism. You can read Friedman's view on this subject in his introduction to the 50th anniversary edition (1994) of the book by Hayek titled "The Road to Serfdom."

One day, I went to Playa Mis Amores, the main Tuxpan beach, and saw something strange. It looked like a blueish transparent plastic balloon that had a somewhat zoomorphic shape. I approached it to pick it up and look at it closely. Jorge Reyes Anaya, the adoptive son of my uncle, quickly told me not to touch it, that it was a Portuguese man o' war (*Physalia physalis*), a dangerous aggregate of animals! I followed his advice and did not touch it. As I previously stated, Jorge Reyes Anaya was not as bad as his sisters. The Portuguese man o' war is a venomous hydrozoan colony that floats over the sea. Sometimes, they are washed up on beaches. They are not made of plastic. They just look like that. The plastic-looking thing is the pneumatophore, an animal composed of animal cells, like us humans. The difference with our tissues is that the pneumatophore's main extracellular matrix component is chitin, as in the exoskeletons of arthropods. Jorge Reyes Anaya knew well the effects of the sting of a Portuguese man o' war. His sister Violeta Reyes was harmed by one such hydrozoan colony when she was swimming, and her skin was permanently scarred by it.

I went with my parents to watch a film in a cinema theater. The movie was "Beauty and the Beast" (1991) at the Cine Continental la Casa de Disney. In such a place, there are no cinemas anymore. Nowadays, it is a supermarket known as Walmart Express del Valle Norte, Benito Juárez. A movie theater is an extremely dark hall with no windows. It has plenty of seats and a giant screen where a movie is projected. Going to the cinema theater was an exciting experience! It was the first time I went to a movie theater. Nevertheless, as I became older, I went to watch plenty of films at plenty of cinema theaters, so, at some point in my life, watching films stopped being exciting.

When I first started second grade, I befriended one of my classmates, whose name was Uriel. This boy was quite nice. At some point, he became acquainted with a classmate, Karina. She was an extremely violent person and loved hitting Uriel! She would grab his hair and forcefully pull it. Karina attempted to do the same with me, but I did not like the way she wanted to physically abuse me. I stopped being a

friend of Uriel because he only wanted to spend all the time with Karina. I think Karina lived in a home where her parents abused each other, so she copied that dysfunctional relationship at school. I believe Uriel was physically abused at home, so he had normalized violence.

On Christmas in 1991, the Union of Soviet Socialist Republics dissolved. That ended the possible threat of nuclear war between capitalist and socialist nation-states. Most of the territory of the Union of Soviet Socialist Republics ended up being part of Russia. As there was no more financing for communism in Mexico, it stopped being fashionable in the following 27 years. In Mexico, everyone believed that the downfall of the Union of Soviet Socialist Republics happened because of Pope St. John Paul II. He was openly against socialism because it went against religion. St. John Paul II supported political movements opposed to socialist regimes, such as the Polish trade union Solidarność. My mother thought that the fall of the Union of Soviet Socialist Republics demonstrated the failure of socialism and utopian communism.

As a result of the end of the Cold War, the United States of America became the de facto hegemonic leader of the world.

I went on holiday with my parents to Oaxaca City, Oaxaca, Mexico. I went sightseeing to the archeological ruins of Monte Albán, Mitla, and Zaachila. Santa María del Tule is a city suburb with a monastery known as Monasterio de Nuestra Señora de los Ángeles y los Siete Príncipes. In front of the Catholic complex, there is an enormous tree. This tree is a Montezuma cypress (*Taxodium mucronatum*). Plenty of folk legends are told about it. It is said that it was born 2000 years ago and that there is no tree in the world with a wider trunk. It is stated that it was planted by an important priest or king of ancient Mesoamerica by burying half of his sacred staff in the ground and that the staff miraculously morphed into the tree. It is said that in its trunk, there is an effigy of an elephant (*Loxodonta africana*), the face of a lion (*Panthera leo*), and a crocodile (*Crocodylus acutus*).

The townsfolk hold a festival to celebrate the tree every October. The highway between Mexico City and Oaxaca City was extremely long and full of horizontal curves. The soil of the Mixtec lands where the highway was constructed was reddish because it was rich in iron (III) oxide (Fe_2O_3). One of the best attractions of that highway was the garbage dump of Izúcar de Matamoros, Puebla. The reason is that in such a tiny place, there were more than 200 vultures (*Coragyps atratus* & *Cathartes aura*)! However, the very best sight of such a highway was its awe-inspiring cacti (*Pachycereus weberi*). This species is so majestic that even famous painter José María Velasco (1887) immortalized one of

them in his painting titled "Cardón (*Cereus candelabrus*) del pueblo de Tecomavaca."

Now, I will tell you why Velasco referred to this species of cactus with a different name to the one I am using. During the 19th-century war between France and Mexico, a French army surgeon, Frédéric Weber, collected this species in Tehuacán, Puebla. As he thought it looked like a candelabrum, he referred informally to this species as *Cereus candelaber* **nom. inval.** but did not describe it formally at that time. When Velasco made his painting, this species had not yet been formally described. However, he continued referring to it as Weber referred to it, correcting the Latin spelling to *Cereus candelabrus* **nom. inval.** At that time, there was already a Brazilian species described with the name "*Cereus candelabrius*" (*Cereus tenellus*) by physician Ludwig Pfeiffer. Therefore, to avoid any confusion, botanist John Merle Coulter (1896) described the Mexican new species with the name "*Cereus weberi*" in his paper titled "Preliminary Revision of the North American Species of *Echinocactus*, *Cereus*, and *Opuntia*." It was published in "Contributions from the U.S. National Herbarium" 3: 357–462. I refer to this species as *Pachycereus weberi* because the basionym of this name was the first name applied in a formal description of this species. (Please look at the glossary to see the meaning of "**nom. inval.**")

The politicians of El Salvador and the guerrilla fighters that fought against them for 12 years signed a peace treatise in Castillo de Chapultepec, Mexico City. This happened on Thursday the 16th of January 1992. The guerrillas were being financed by communist countries as part of the last conflicts of the Cold War. As the Union of Soviet Socialist Republics was dismantled, the struggle for communist hegemony in the New World ended as well. As a result of the civil war of El Salvador, plenty of immigrants travelled to the United States of America, where they organized themselves into dangerous gangs known as Mara Salvatrucha. The members of these gangs tattooed themselves to show their allegiance to the mafias. Tattoos all over the body eventually became fashionable because of these guys.

My aunt Ana Reyes was always fat. Her obesity was a health risk. In 1992, she had gallstones. She was already booked to have a gallbladder removal surgery on Thursday the 7th of May 1992. On Thursday, the 30th of April 1992, she ate a huge sandwich of flour from wheat (*Triticum aestivum*) with yeast (*Saccharomyces cerevisiae*) that was filled with chicken meat (*Gallus gallus*) and mole. Mole is a sauce made of cinnamon (*Cinnamomum verum*), black pepper (*Piper nigrum*), garlic (*Allium sativum*), onion (*Allium cepa*), banana (*Musa* x *paradisiaca*), raisins (*Vitis vinifera*), peanuts (*Arachis hypogaea*), almonds

(*Prunus dulcis*), cloves (*Syzygium aromaticum*), chocolate from cocoa (*Theobroma cacao*), tomato (*Solanum lycopersicum*), capsicums of several domestic varieties (*Capsicum annuum*), sesame (*Sesamum indicum*), cumin (*Cuminum cyminum*), and lard from a pig (*Sus domesticus*) (to know why the scientific name of bananas has an "x" in the middle, please see the glossary). My aunt Ana Reyes was in the school where she worked as a schoolteacher when she ate the sandwich. Such sandwiches were made for a party for the kids, as there was a celebration to honor them every St. Walpurgis's Eve. My aunt ate that sandwich full of fat even though she was told by her physician to follow a low-fat diet due to her gallbladder health issues and her obesity. Eating so much fat led to extreme abdominal pain. As a result, she was admitted to the hospital and an emergency surgery was performed on her to remove her gallbladder.

Unfortunately, this happened on a public holiday, when none of the expert surgeons were working, so the surgery was performed by an inexperienced medical student. This inexperienced guy mutilated her common bile duct and part of her liver. This was a mistake. After this, my aunt underwent several surgeries by multiple physicians until she was healthy. These surgeries were made to correct the medical error. As part of her treatment, my aunt had to attend psychotherapy by a woman named Angélica. After seven reconstructive surgeries, Ana was not ready to correct her food addiction, and Angélica convinced her that her food addiction was good because that led to her health problems. According to Angélica, such illnesses were good because they would allow my aunt to empower herself and control every family member in my house.

Following the advice of malicious Angélica, she started blaming every member of my maternal family for her illness. Angélica told her that she was not responsible at all for her own health. Through appeals to pity and making my other aunts feel guilty, she was able to attain total control, obedience, and servitude from them. So, Luisa and Yolanda started to work for her while she spent the whole time just relaxing and ordering them around. My mother was not subdued by her. The reason was that my mother was too worried that my father had started to ignore and hate her. My father also started to spend more time somewhere else. The reason was that he was with his paramour, Nora.

I used to go twice a week to karate classes with Enríquez. His classes involved warmups, katas, and sparring. I was, of course, more interested in Enríquez's speeches than in all the body conditioning. His sports federation organized championships, examinations, and demonstrations. For these events, we went to different venues; they did not happen in Enríquez's dojo. I obviously suffered from

respiratory illnesses every time I knew there would be a karate exam. The first championship was in an indoor volleyball court known as Gimnasio Olímpico Juan de la Barrera. This place is found in Alberca Olímpica, Benito Juárez. In that place, I broke a wooden board with one of my hands and another one with one of my feet.

The exams were taken in a distant dojo. This place was found in Lomas de Tecamachalco, Naucalpan de Juárez, State of Mexico. This karate school does not exist anymore; that place is now the Big Bola Casino Tecamachalco. The office of the owner of the sports federation was in this karate school. Enríquez idealized the owner and the owner's family. He thought they were amazing. Enríquez claimed that the owner was the first one who introduced karate to Mexico. However, he was not the first one to do this, as the true founder of Mexican karate was Sensei Nobuyoshi Murata. The owner was extremely egotistical. He was the only member of the sports federation who wore a red belt and was dressed in a silvery uniform. He always appeared in public wearing a sword. We were commanded to salute him by adopting the same posture that Muslims employ to pray to God YHWH (Allah). This position was performed by falling upon our faces. We did that in all championships, exams, and demonstrations.

Everyone was commanded to address him as the grandmaster. Furthermore, the awards that he presented to champions were framed portrait photos of himself, and the championships were named after him. The owner was very overweight. Hence, he did not practice karate or teach any classes either. Even if I was a naïve kid, I used to laugh at him in secret when I was with my classmates, as it was obvious that he was not a true karateka. To achieve higher karate ranks in the sports federation, it was not compulsory to be a proficient karateka. The only requirement was to pay the entrance fees for all the events organized by the owner. He also awarded special diplomas to everyone who paid on time at their dojo. The owner was so wealthy that when I went to the first championship, he hired famous singer Thalía Sodi to entertain the audience (to listen to the song that she sang, please watch "Thalía - Sudor Parte 1 y 2 (Video Original Puerto Vallarta)" (1991)).

At that time, I traveled to Puebla de los Ángeles, Puebla, and from there to Cholula, Puebla, where I saw the enormous pre-Hispanic pyramid. The Spaniards built over the pyramid a Catholic church known as Iglesia de Santa María de los Milagros so people of the Viceroyalty of New Spain would worship the Catholic religion instead of the ancient Mesoamerican religion. We also visited the military forts where the Mexican army fought the famous battle against the French army that is commemorated in the Cinco de Mayo celebration.

In my elementary school classroom, there were kids from several grades taking the same classes. First, second, and third grades were mixed. Schoolteacher Blanca instructed all of us at the same time. The only third-grade students were Giovanni and María Esther. Every morning, when we arrived at school, all of us entered the classroom to wait for Blanca. The classroom light bulb remained turned off until the schoolteacher arrived. As the classroom lacked windows, the only source of light was the sunlight that entered through the door. One morning, before the schoolteacher arrived, María Esther started to address everyone to claim that the Devil was inside the classroom. She pointed to a wall, and she said she was looking at him there. Alexives started to pray to attempt to exorcize the Devil. All the rest of my classmates, but not María Esther, started to cry, and they shed a lot of tears. They all claimed that they were able to see the Devil inside the classroom. Nevertheless, I did not see anything that morning. I think that there was no theophany of the Devil that morning.

María Esther was able to scare all the persons that were inside the classroom. They were so terrified that they started to hallucinate. Thus, they saw someone who was not there in real life. That day, I knew for the first time that truth is not what one can empirically perceive, but what a social group accepts as true. That day, the whole social group approved María Esther's worldview, so everyone believed in that and acted accordingly. Sociologists refer to this as the Thomas theorem. It is not really a theorem; it is an axiomatic belief in sociology.

I had a classmate that all schoolteachers and all my classmates named Lilián Romero Carrillo. That was her name in all official documents. However, she always told me that she kept a secret, that such a name was not her real name. I thought she was telling lies because the Secretaría de Educación Pública (SEP), the government's federal executive department in charge of education in Mexico, would not allow false names in official documents.

As a person suffering from post-traumatic stress disorder, I suffered relapses every time I saw stimuli that reminded me of my past trauma. My aunt Ana Reyes knew that I had necrophobia and that my phobia was specifically triggered by human mummies, but she did not know why. The reason why I was so afraid of them was that looking at them unleashed bouts of melancholy that lasted for several days. During these times of intense sadness, I used to think about death and what dying means. Ana Reyes decided to visit with me a museum in San Ángel, Álvaro Obregón, Mexico City. This museum is a former monastery. My aunt wanted to heal my fear of human mummies by forcing me to see the mummies that were found in the monastery graveyard and that were exhibited in such a museum. The day

that Ana Reyes was going to force me to go with her to the museum, I immediately suffered from a fever due to a psychogenic respiratory illness. In that way, my pathological psychological coping mechanism saved me from going to the museum.

Jurisprudence

Rafael used to steal my lunch until I started to eat something that he disliked. According to Enríquez, his behavior would be reprehensible. Enríquez would think that he was behaving like that due to a faulty education. Education is not only what one learns at school. A kid also requires a teacher who is an expert in leading a virtuous life. In that way, kids can correctly mold their souls by imitating such teachers. That is what Rafael lacked.

Enríquez was a nationalist. He displayed a Mexican flag in his dojo, and he sewed a patch to his uniform that looked like the Mexican flag. He taught that we always ought to respect all politicians that hold public offices in our area of jurisdiction. He taught us that we also needed to follow all the laws that they would enact. He also wanted to teach us to love our country. He said that because he believed that all authorities and governments are fair. As I stated before, my love for my country was a love for my uncle Jorge Reyes Mejía, nothing more than that. According to Enríquez, it is good to love and respect our relatives who have lived for more time than we have. We ought not only to love them but also to follow all their orders and advice. Nevertheless, he would not accept my love for my country based on my love for only one man. The reason is that, according to him, my country itself should be seen as an older person than me and as my relative. According to him, my country should be seen as my own mother, a mother who would merit the same love and respect as a biological mother.

According to the doctrine of Enríquez, my uncle Jorge Reyes Mejía would be a righteous man. However, Enríquez's teachings did not entail that one should be oppressed by any random person because of being too morally good. One should be constantly defending oneself against those who attack us. Therefore, according to Enríquez's doctrine, my uncle should have broken up the relationship with his wife Esperanza as soon as she started to mistreat him. He could have done this if he had not ingested the jimsonweed (*Datura stramonium*) that she gave to him. Even if this seems impossible, there is a way to avoid ingesting any love philter. To do this, one ought not to ingest any food or drinks that are offered to us by one's sweetheart at the beginning of a sexual relationship. According to Enríquez's teachings, my uncle Jorge Reyes Mejía should not have felt

sad about being poor. Moral virtue is more important than money.

According to Enríquez's teachings, the end of the Cold War was worth celebrating. The reason for being joyful about this would not be that the planet would not be threatened anymore with a likely nuclear war. The reason to be happy about this was that this was the most advantageous outcome for the capitalist American authorities that had hegemonic control over Mexican authorities. As a loyal Mexican citizen, he thought he should always submit to the authority of the people who were legally empowered to rule him. This included being happy about such political events that would make them happy.

My aunt Ana Reyes acted wrongly according to Enríquez's teachings. Firstly, she should have followed her physician's advice and strictly followed the diet that he prescribed. The reason is that to attain the personal growth that Enríquez idealized, she should have protected her body from all evil and practiced temperance by not eating when she knew she should not. Ana Reyes also acted wrongly when she blamed her sisters after the unplanned emergency surgery that resulted in a medical error. She should have acknowledged that she had the responsibility for her health at that time and that she made mistakes. She should acknowledge her own blame for such mistakes and attempt to avoid them again. The reason for this is that Enríquez always looked for fairness. Blaming people who are innocent because of an unfortunate event is unfair.

María Esther acted impiously when she scared the children with the Devil because she was having fun while frightening them. According to the doctrine of Enríquez, one needs to protect the individuals who are weaker than us and not abuse them. My classmates also acted wrongly, as evil and adversity should not be faced by weeping. Evil and adversity are to be faced with effective actions. My classmates should have immediately run away from the classroom, fleeing "the Devil" and telling the first schoolteacher that they would have met what María Esther was doing. They should have done this instead of just crying and doing nothing. In case this was not just a cruel prank of mischievous María Esther, my classmates should have run away as well, as the Devil is indeed very dangerous, in case he is truly as depicted in the myths of Abrahamic religions.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

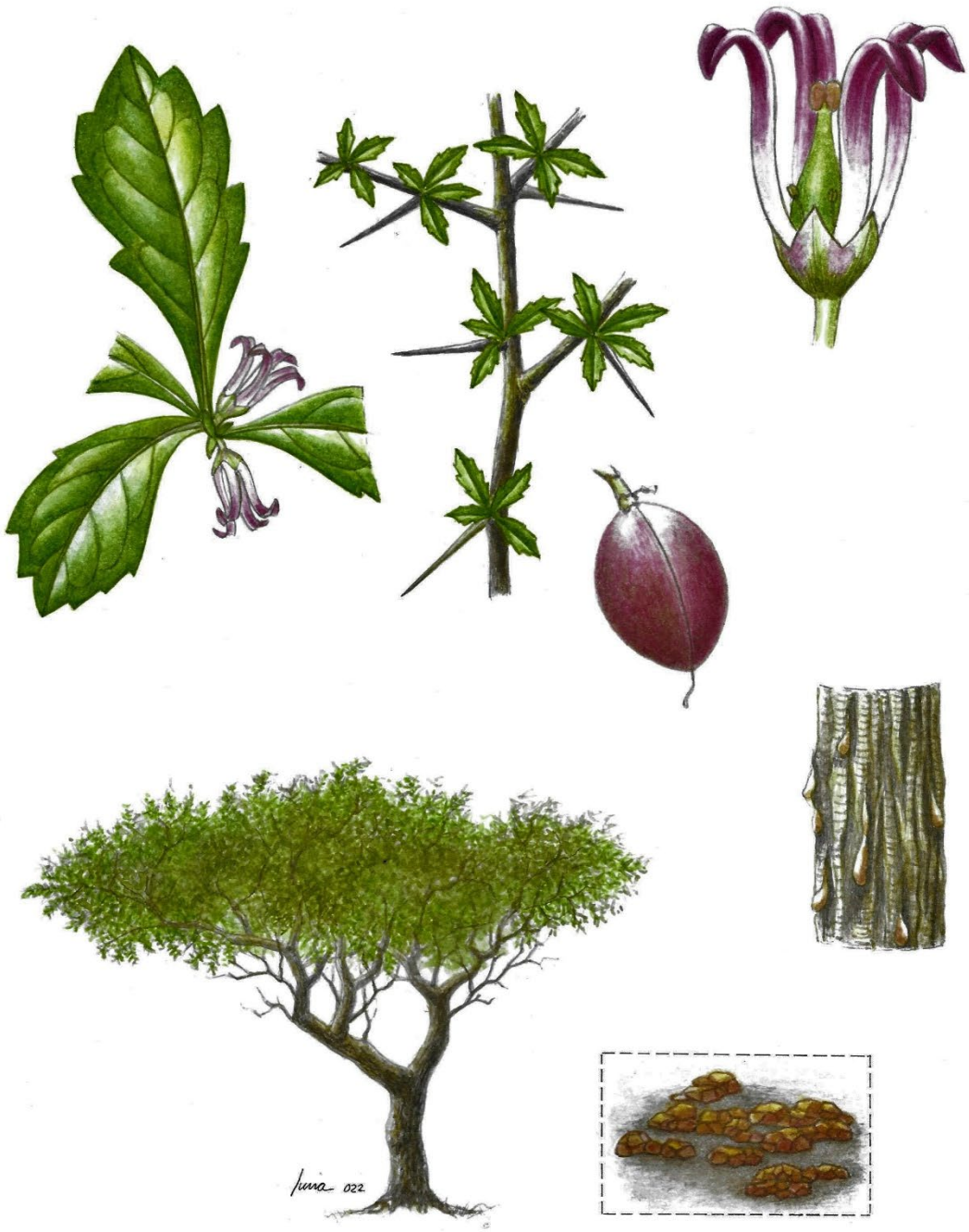
CHAPTER 5. *COMMIPHORA MYRRHA*

While I was studying second grade, I started undergoing psychotherapy. My therapist's name was Núria. Her office was in Colonia del Valle, Benito Juárez (19.376847636049593, -99.16529587385988). Núria made me solve the intelligence tests known as the Stanford-Binet Intelligence Scales and the Porteus Maze test. She also told me to make drawings and asked me to speak about the feelings I had and the ideas I thought about. The therapist declared to my mother what I knew and never said to her. It was the secret of my father, that he was the lover of another woman. My aunt Ana Reyes confirmed that to my mother and showed Nora's portrait photograph to her. My aunts and I knew about her, but my mother did not.

Nora hated my mother and me, because she wanted my father to leave us forever, but he did not do that. My father bought a house for Nora in Jardines de Santa Mónica, Tlalnepantla. He also bought a school for Nora in Downtown Cuajimalpa, Mexico City. He used to frequently go shopping with her in the United States of America. Nevertheless, my father did not divorce my mother. My father was deeply in love with Nora, but he did not totally trust her. The reason why I knew about her, and I talked about her with the therapist, was because Nora used to stalk my aunts and me from the street in front of my house. She used to do that while she was waiting for my father to go out with her on romantic dates.

Psychotherapist Núria claimed that I had many health problems because I was an intellectually gifted child. This means that I had more intelligence than the average child of my age. She claimed that being an only child was harming me. She added that to heal me from all my mental health problems, my parents needed to sexually reproduce to have more offspring. My mother was ready to do that, but fortunately, my father was not, so I never had any siblings. I think that Núria's solution ignored the source of my real problems. Núria was an incompetent therapist that did not listen to me and used to make fun of me and claim I was a liar. Moreover, she used to bully me a lot because I did not attend school camping trips. I only attended psychotherapy for a year.

The Most Holy Popocatépetl is a volcano that is close to Mexico City. It was dormant for a long time, but suddenly it became active. Fumaroles appeared in the crater. They were emitting hydrogen sulfide (H_2S) and sulfur dioxide (SO_2). This process created yellow crystals of native sulphur (S_8). Together with the volcanoes of the Most



Commiphora myrrha **(Nees von Esenbeck, 1828) (Sapindales: Burseraceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 855.**

Holy Iztaccíhuatl, these mountains were worshipped as divine beings during Aztec times. According to an ancient legend, once upon a time, Popocatépetl was a brave military officer and Iztaccíhuatl was his wife, a princess. She was almost dying, and to avoid that fatal fate, her husband asked the Deities to transform that moment into an eternity of time, so she would never reach the time of her death. The almighty Deities granted his prayer, and both became volcanoes. In modern times, the townspeople of Santiago Xalitzintla, Puebla hike up the volcanoes to pray to them and to present holy offerings to them. They do this because the volcanoes can perform miracles. This ritual ceremony is led by rainmakers. Rainmakers are Catholic Indigenous People that are descendants of the Aztecs. Their task is controlling the weather through magical rituals. This ensures that farmers obtain good crop production.

During the time I was studying third grade, I lived an extremely happy academic year, as my new schoolteacher whose name was Lidia was morally good, and she loved that kids were happy. That year, there was a new student in my group, a boy named Mario Alvarado. He, Toño Barrera, and I were the only students in third grade. We became great friends. The time that we spent together was marvelous, as we were laughing most of the time due to the jokes that we used to tell each other. Mario loved to feel motion sickness. He was able to do this by whirling in the same place very quickly. Toño and I learned how to induce motion sickness in ourselves, and we always used to do that as well!

On Sunday the 20th of September 1992, the Catholic Church established diplomatic relations with the government of Mexico. The Catholic Church and the government of Mexico did not have diplomatic relations since the 19th century, during the reign of President Benito Juárez.

That year I had so many succulent plants in my garden that we went to Metepec, State of Mexico, to buy plenty of ceramic plant pots. This was to add more plants to my collection. Some of these plant pots were zoomorphic. All our backyard ended up being full of these handicrafts.

On Thursday the 31st of December 1992, the European country known as Czechoslovakia was dissolved. Two countries became independent because of this. These countries were the Czech Republic and Slovakia.

I have a strange memory from that time. In Xochimilco, I saw a sculpture of Jesus, the founder of Christianity, that I found quite disturbing. He was depicted as a young child sleeping on a human skull. I wondered how Jesus, the symbol of good and light, slept over something as sinister and dark as the severed head of a dead person. This sculpture is known as the Santo Niño de las

Suertes. I always wondered what its origin was until I saw an image of the Leiden Anatomical Theatre made by Jan Cornelius Woudanus (1610). In it, there was a putto, an angel depicted as a child, resting over a human skull. There are several later 17th-century paintings and sculptures depicting this motif. Apparently, this allegory associated with anatomy became so popular throughout the 17th century that one such image arrived in Mexico, where it was worshipped as Jesus himself. In the Rijksmuseum Boerhaave of Leiden, Netherlands, there is a reconstruction of the anatomical theater, but they did not include the "Santo Niño de las Suertes." It might have been too creepy for the museum curator!

The currency of Mexico was MXP. It suffered from great instability, so inflation made everything more expensive. The government of President Carlos Salinas de Gortari was not able to solve the economic troubles. Instead of trying to find a solution, the government decided to change the currency of Mexico, so MXP was changed for MXN on Friday the 1st of January 1993. This did not solve the ever-increasing economic issues. I can remember that the government of Mexico had a television advertisement about the change of currency with a slogan that stated: "Nuevo peso, más práctico y más sencillo." These words were always said while a ridiculous melody was played. This annoying melody always was coincident with the words "más sencillo."

The Epiphany is a holiday in Catholic religion that commemorates the time when Zoroastrian magi visited Jesus when he was a newborn baby to worship him and to give gifts to him. These gifts were gold, a resin known as myrrh (*Commiphora myrrha*), and a resin known as frankincense (*Boswellia sacra*). This religious anniversary is celebrated in Mexico in the following way: Parents give gifts to their children when they are kids. These gifts are delivered in secret by the parents during the night, while their children are sleeping. The next morning, the parents tell their children that the ancient Zoroastrian magi that worshipped Jesus visited the house in person to deliver such gifts. The Epiphany was the end of Christmas holidays. The first school day after the holidays, my classmates and the students from other classrooms showed the toys that were given to them in the Epiphany celebration. The best gifts were always the video games! Anyone had the chance to play with the new video games. That day, there were no lessons, so instead of that, we played video games!

In that way, I started to love video games. Two boys named Joel and Miguel who were highly enthusiastic about video games made me feel interested in them. As a result, I asked my parents to buy a Super Nintendo Entertainment System (SNES) console for me. My first SNES game was "Super Mario

Kart" (1992). I also asked my parents to buy a Game Boy for me. My first Game Boy game was "Tetris" (1984).

It can seem strange that in Christian mythology, the priests of a non-Abrahamic religion such as Zoroastrianism visited Jesus, the founder of Christianity, to worship him. This is particularly strange because Zoroastrians do not believe in God YHWH (Allah). In Zoroastrian religion, it is stated that the sky God Ahura Mazda has an enemy whose name is Angra Mainyu, the Devil. The Universe was created by both. All good things were created by the sky God and all bad things were created by the Devil. One day, the Saoshyant (one who brings benefit), an emissary of the sky God, is going to lead the army of God's angels against the army of the Devil's angels. As a result of this, the diabolical army and its commander are going to be defeated. The diabolical army is going to be commanded by Azhi Dahāka, the Devil's son. After the battle, the righteous will resurrect and live forever. This myth became part of Jewish religion since the time the Jews were subjects of the Persians who practiced Zoroastrian religion. Ahura Mazda was of course substituted by YHWH in Jewish literature. Some bits of this myth can be found in a Judaized form in the "Book of Daniel," one of the last books of the Jewish "Tanakh" to be written. Later Jewish apocalypses introduced more Zoroastrian ideas. The culmination of this cultural diffusion was Christianity. As can be read in the "Avesta" of Mage Zoroaster Spitama, Zoroastrian magi were awaiting the coming of a divine savior that would deliver humanity from sin, from the Devil, and from death.

The Christian messiah Jesus is somewhat like the pagan Saoshyant that was part of sacred texts that were written many centuries before Christianity. In Catholicism, on Epiphany, people eat a three kings' cake that in Mexico is known as rosca de reyes. This bread contains inside of it a tiny, non-edible figurine of a kid. This figurine is supposed to be Jesus. The person who finds this figurine inside the bread needs to buy food for all the other diners on the 2nd of February. The rosca de reyes is a bread made of flour from wheat (*Triticum aestivum*), sucrose from sugarcane (*Saccharum officinarum*), yeast (*Saccharomyces cerevisiae*), and eggs lain by chickens (*Gallus gallus*). The rosca de reyes is garnished with cherries (*Prunus avium*), figs (*Ficus carica*), and giant barrel cactus (*Echinocactus platyacanthus*) acitrón candy.

At that time, paleontologists commissioned plenty of casts of the skeleton of hadrosaurid dinosaur *Latirhinus uitstlani*. It was a celebration! Paleontologists were celebrating that they found this hadrosaurid, as it was the first non-avian dinosaur excavated in Mexico. They mounted a cast of the skeleton of this creature in the Museo del Instituto de Geología de la UNAM. Another cast was

mounted in the majestic museum known as Universum, Museo de las Ciencias. It was also rejoicefully displayed in the first exhibition of basal synapsid and non-avian dinosaur animatronics shown in Mexico. This exhibition was known as Dinosauria en el Bosque de Chapultepec. This exhibition was amazing! I was extremely excited when I visited it! Everything was dark, except the colorful lights that illuminated the zoomorphic machines that were surrounded by semidarkness. The noises that the machines made were like the sounds made by tigers (*Panthera tigris*). The animatronics resembled the following tetrapod species: *Dimetrodon grandis*, *Stegosaurus ungulatus*, *Pachycephalosaurus wyomingensis*, *Triceratops prorsus*, *Parasaurolophus walkeri*, *Apatosaurus louisae*, *Allosaurus fragilis*, *Tyrannosaurus rex*, and *Deinonychus antirrhopus*. There were also stationary sculptures of the following species: *Pteranodon longiceps* and *Tenontosaurus tilletti*.

Since I was very little, I rode a tricycle. When I started riding it, my parents and I visited some parks so I could ride my tricycle there. These parks were Parque de los Venados, Benito Juárez; and Alameda del Sur, Coyoacán. At some point, they bought me a Benotto bicycle. My aunt Luisa taught me how to ride my new bicycle. I used to ride my bike in the afternoons. My aunt Luisa was always with me during such short trips. We used to go to the nearby park named Jardín de las Rosas so I could ride my bike. I loved riding my bike. It was fun to pedal as fast as I could to feel the air moving swiftly in front of my face due to the high speed! At that time, the fountain of Jardín de las Rosas that was right in front of the avenue known as Avenida División del Norte had a lot of water (H_2O) leaks. Therefore, it partially flooded the park ground around the fountain. A passerby decided to throw into that puddle some living annelid worms that belonged to the species *Tubifex tubifex*. These worms are bred by aquarists to feed pet fishes that live in aquaria. Therefore, when I was a kid, it was possible to find this type of worm as a feral animal that was introduced in the park.

While I was attending psychotherapy, therapist Núria used to rebuke me for not going on school camping trips. According to her, I needed such experiences. I think that a psychotherapist that verbally abuses her minor patients is not ethical. I really do not know why Núria said that about school camping trips, but I believed in what she said, so I told my mother that I wanted to go on the next school camping trip. My mother made me attend a swimming school named Natación y Squash Coyoacán, so I could learn how to swim, so I could go on the next school camping trip (19.35210822106558, -99.16878259487164). In the changing rooms, I noticed the difference between girls and us boys while we were naked. As we still lacked secondary sex characteristics, I simply

saw that girls had vulvas instead of a penis and testicles.

That year, I went on holidays with my parents to the port city of Veracruz, Veracruz. I was able to swim in the swimming pool of the hotel as I had been taking lessons. On that trip, I visited a public aquarium known as Acuario de Veracruz. I was totally speechless when I saw the extremely gigantic Pecera Oceánica, an immense fish tank! In that place, there were huge living fishes such as spotted eagle rays (*Aetobatus narinari*), nurse sharks (*Ginglymostoma cirratum*), sandbar sharks (*Carcharhinus plumbeus*), Atlantic tarpons (*Megalops atlanticus*), great barracudas (*Sphyraena barracuda*), live sharksuckers (*Echeneis naucrates*), and Atlantic goliath groupers (*Epinephelus itajara*). Nowadays, the fish species kept in that fish tank are not the same ones that were kept at that time.

Lupis Villagrán, the daughter of Headmaster Daniel Villagrán, bought a personal computer (PC). At that time, they were very scarce objects. None of my classmates had one at home. Neither did I. My mother learned at university how to use gigantic computers that were the size of a room. They were essentially machines that were able to perform very complex mathematical algorithms by using logic. They were the only computers available at that time. During the 1990s when I was attending elementary school, there were computers that were not only accessible to large corporations or research institutes. The new PCs were small enough to be kept at home and were able to perform different types of tasks. Lupis taught us how to use the most essential features of "Microsoft Windows 3.1" (1992) on her desktop.

She had an exceedingly good educational game to learn basic arithmetic. This game was "Math Rescue" by Karen Crowther (1992)—it was very peculiar as it used the psychological principles that B. F. Skinner (1938) wrote in "The Behavior of Organisms: an experimental analysis" to reward students every time they simplified an arithmetic expression rightly. It was an operant conditioning software. In a way, these types of programs were the precursors of modern algorithms that brainwash and manipulate adult people all over the Internet. Now they are not beautiful anymore. Now they are scary...

PCs revolutionized the way people work. In the 1990s, users were able to perform various tasks using the same machine that in previous decades required totally different machines to be done. There was no need to keep documents printed on paper, as computers were able to keep them in a digital format. It was not only possible to keep two-dimensional written texts and graphics in archives as in the past, but also all other types of media that computers could store. As a result of this, Western civilization experienced a surge of technological development. My parents

bought me my own PC. It was an Acer 1100/LX 101 386SX-16. I had fun making art in "Microsoft Paintbrush" (1992).

One day, Lupis's computer suffered a malware attack. I was impressed to see how Lupis got rid of the malicious software by using "Central Point Anti-Virus" (1991). After the malware attack that occurred on my school computer, there was a debate among students regarding the nature of malware. Toño Barrera claimed that it was due to microscopic life forms of a similar nature to bacteria that infect humans, causing diseases. According to me, it was caused by microscopic metallic electronic machines. We were both wrong. It is, in fact, just software coded in silico.

I had a classmate whose name was Erika. She was studying at a lower grade than I. One day, she told me a fascinating story, that her father traveled a lot and always gave gifts to her that he bought during his business trips. She added that he gave her a taxidermy rat (*Rattus norvegicus*). That was surprising, as in my culture, rats are considered unclean animals. Many people fear just looking at them. Furthermore, many people are also afraid of taxidermy mounts. I am sure she was lying and only said that to fake bravery.

There is an archeological site in Malinalco, State of Mexico that is a beautiful building carved into the cliffs of a mountain. The mountain is known as Cerro de los Ídolos. This magnificent temple was built before the Spanish Conquest. In the south-facing mountainside of Cerro de los Ídolos, there is a stream. My parents and I went to see the stream. We were scared when we noticed that in the plants that were close to the stream, there were innumerable Opiliones known as *Leiobunum consimilis*. Everywhere we turned our heads, we could see the moving legs of these arachnids that were standing over other individuals who were also standing over other individuals. They were very small, but there were so many of them that it was a frightening sight. According to my mother, there were millions of them. My father was afraid, so he carried me, and we ran away from that place. I have never seen again this phenomenon in all my life.

In 1993, there was a television show that was named "Cámara Infraganti." The television presenter of this show was Oscar Cadena. One day in his show, Cadena made a brief documentary about the mummies of Guanajuato. I watched the television show that day. The following days were of course horrible. Watching the television show made me feel depressed. I also started to have dreadful nightmares. My melancholy was overwhelming due to the post-traumatic stress disorder.

At that time, a nature reserve was inaugurated. It was Parque Ecológico de Xochimilco, Xochimilco (19.29700161744218, -99.0939835440012). I visited it for the first time the day it was

inaugurated. That day was Saturday the 5th of June 1993. I can remember that day very well because Manuel Camacho Solís, the regent of Mexico City, arrived that day in a helicopter! I had never seen a helicopter so close to me, and it was awesome! Even if this nature reserve was behind the Xochimilco chinampa landscape, the ecosystem found in Parque Ecológico de Xochimilco was totally different. The habitat found in the chinampa landscape comprised agricultural lands with a high human impact on the environment. On the other side, the habitat of Parque Ecológico de Xochimilco comprised the typical wetlands of the lakes of the central Mexican highlands. As a result of this, this place attracted all sorts of native birds. I started to go there frequently because I was a birdwatcher. I always visited the nature reserve with my Hansa 7x50 ZCF binoculars to watch the birds more clearly. Since 1993, I would go at least 20 times each year during the following nine years to Parque Ecológico de Xochimilco. In this fabulous place, I saw plenty of good-looking birds such as the wood duck (*Aix sponsa*), the ruddy duck (*Oxyura jamaicensis*), the Aztec rail (*Rallus tenuirostris*), the northern harrier (*Circus hudsonius*), the belted kingfisher (*Megaceryle alcyon*), and the loggerhead shrike (*Lanius ludovicianus*).

During the summer of 1993, I went on holiday with my parents to Acapulco, Guerrero. While I traveled to Acapulco on the new highway, I was greatly impressed by the great height of Puente Mezcala Solidaridad, the bridge that crossed the venerable Balsas River.

In fourth grade, I had another excellent schoolteacher. Her name was Consuelo. She was not as funny as Lidia. Nevertheless, she was good because she did not abuse or terrify the kids.

That year, an artist painted murals all over the school's outdoor walls. The art style depicted in such murals was modern figurative art. The images depicted silhouettes of many people that were painted with different colors.

In 1993 in Africa, there was a genocide of people that belonged to the Tutsi ethnic group. They were killed in large numbers by people who belonged to the Hutu ethnic group. The Tutsis retaliated by killing as many Hutus as possible. Their racial hatred was a legacy of the racial stratification when their society was ruled by Europeans during colonialism.

On the Day of the Dead, we offered food and drinks at an altar in honor of our deceased relatives. These Day of the Dead altars were extremely common all over Mexico City. Before setting the altar, I used to go with my parents and aunts to Downtown Xochimilco to buy food and inflorescences for the altar. Some of the inflorescences that we bought belonged to the species that is commonly known as cockscomb (*Celosia argentea*). According to

my grandmother Lorenza, these inflorescences were offered to dead children. The dead kids symbolically visited the altar on the 1st of November. These inflorescences were utterly important for my grandmother Lorenza because she thought that Luis Reyes, her son, was not totally dead. She thought he still existed as a ghost or something similar.

Botanists refer to the inflorescences of a cockscomb as its spikes. On the Day of the Dead, we also bought inflorescences of a plant that is commonly known as the Aztec marigold (*Tagetes erecta*). According to my grandmother Lorenza, these inflorescences were offered to dead adults. Our dead mature relatives symbolically visited the altar on the 2nd of November. Botanists refer to the inflorescence of an Aztec marigold as its capitulum. It was lovely to buy food and inflorescences downtown in Xochimilco on the Days of the Dead of the late 1980s and early 1990s. In those years, the chinampa landscape could be found right in Downtown Xochimilco. The chinampa landscape was a countryside full of agricultural farm plots and water canals surrounded by Bonpland's willows (*Salix bonplandiana*). These idyllic canals were full of colorful trajineras. Trajineras are broad boats with a table inside of them that are used to travel through the Xochimilco canals. In the late 1980s and early 1990s, the trajineras were still embellished with colorful arches covered with pretty flowers and inflorescences that, as I said before, could be seen right in Downtown Xochimilco! Thus, Downtown Xochimilco had bucolic rural scenery.

In the week before the Day of the Dead, the market that was found in Downtown Xochimilco was full of scents of Aztec marigold inflorescences and burnt copal (*Bursera fagaroides*, *Bursera cuneata*, *Bursera bipinnata*, & *Bursera copallifera*). The market was also full of objects that were a syncretic mix between the traditional Mexican Catholic religious celebration of the Day of the Dead and the American Hallowe'en. Hallowe'en is always associated with monsters and demons. The main Hallowe'en symbols are pumpkins (*Cucurbita pepo*) with carved eyes and mouths that depict ghosts and demons of Irish folklore. A pumpkin with these features is known as a Jack-o'-lantern in honor of a penitent ghost that was cursed by God YHWH and by the Devil. Each year in my school, there was a Hallowe'en costume contest. My mother used to make the costumes that I wore. Downtown Xochimilco has changed a lot since that time. It is not a rural place anymore. It is totally urbanized. The remaining places with canals close to the downtown are the touristy trajinera piers. Despite this, nowadays there are just average modern private houses built over all the downtown chinampas.

Regarding death, my grandmother Lorenza used to tell me an anecdote that happened to her while she was a kid. She was an orphan, so she went to live with her grandmother, who became her primary caregiver. My great-great-grandmother lived in Los Ranchos de San José, a village close to Villa Guerrero, State of Mexico. In her house, there was a black cherry tree (*Prunus serotina*). One night, a great horned owl (*Bubo virginianus*) perched on a branch of the tree and started to vocalize. My great-great-grandmother thought that such an event was an omen. She claimed that meant that she would soon die. Thus, she told Lorenza to do whatever she could to scare the owl. My grandmother Lorenza was unable to scare the owl. The owl vocalized in the same place for several nights, and my great-great-grandmother died less than a month after the owl started hooting. After the burial, Ismaela arrived to tell her niece Lorenza that she should leave the house to go to live with her, as Lorenza was still a kid. When both were leaving the house, Lorenza claimed that she did not want to leave the building, as she was able to listen to the ghostly voice of my dead great-great-grandmother who was calling her inside...

According to the Graeco-Roman Olympian religion, Ascalaphus was an angel of the Hades God. Hades is the dwelling place of the souls of the dead. The task of Ascalaphus was to snatch the souls of dying people to Hades. Ascalaphus was transformed into an owl by Persephone the Kore, the queen of Hell. Since then, owl Ascalaphus has visited dying people before they finally died. That is why Pliny the Elder stated in his "Natural History" that the Eurasian eagle-owl (*Bubo bubo*) was an extremely bad omen. Spanish bishop St. Isidore of Seville transferred this superstition to Christian Catholicism in his book "Etymologiae."

Wild plants produce seeds at different times of the year. Seed production time is determined by a combination of genetic and environmental factors. An allele diversity that allows a wide variation in flowering and fruiting times is evolutionarily advantageous. The reason behind this is that rainy seasons and droughts slightly change every year. This is a natural cycle due to meteorological phenomena such as El Niño, La Niña, and random probability. Thus, a wild plant species that can produce flowers or fruits at different times of the year is more able to cope with these seasonal changes that happen year after year. However, this is bad news for a farmer. It is bad for farming purposes that a plant produces reproductive structures at different times of the year. To improve harvesting efficiency, it is better to artificially select such plants that produce reproductive organs at the same time. That is how the inhabitants of the Fertile Crescent ancient civilizations in the Middle East modified the reproduction times of

their crop plants. They artificially selected their barley (*Hordeum vulgare*), their rye (*Secale cereale*), their einkorn (*Triticum monococcum*), and their emmer (*Triticum turgidum*). In that way, all the individuals of a given crop species were harvested at the same time of the year.

As more species of wild plants were domesticated, different harvesting times were allocated to them. The species that were harvested in the last months of the year, such as leeks (*Allium ampeloprasum*) and olives (*Olea europaea*), were harvested during the middle of autumn. The end of the harvest season that these pre-Islamic farmers chose was celebrated by all the civilizations that inherited their edible plants in the Middle East, North Africa, and Europe. These civilizations celebrated such dates as a secular and religious festivity. In religious mysteries, such dates were frequently linked to human death and the postmortem survival of the human soul. This survival hypothesis entails the belief that human cognition remains existing after biological death as a ghost.

The reason why these cultural features of farming and religion are linked is that during harvest, some plant species die, and farmers keep the seeds to allow the birth of new life the following year. This is a metaphor for human death and human afterlife. This is the very reason why, in Christianity, angels of death are depicted holding scythes, typical farming tools. In the Middle Ages, Pope St. Gregory III decided to celebrate all saints and martyrs on the 1st of November. Later, all dead Catholics were celebrated on the 2nd of November, when this celebration was fused with Samhain and other Northern European pre-Christian festivals related to harvesting and death. In pre-Hispanic Mesoamerica, people left ritual offerings in honor of their dead relatives in their tombs when they were buried. This happened throughout the year when a person was buried. In fact, a lot of data known to archeologists about Mexican pre-Columbian civilizations is known due to the offerings that have been found inside tombs along with corpses.

During the time of the Viceroyalty of New Spain, the pre-Hispanic worship of dead ancestors with tomb offerings was fused with the Catholic worship of dead people with offerings that happened at the end of harvest season. The European colonialist holidays to worship dead ancestors were the All-Saints' Eve (All Hallow's Eve, or Hallowe'en of the 31st of October), the All-Saints' Day (the 1st of November), and the Day of the Dead (the 2nd of November).

In sixth grade, a student named Víctor had a necklace with a peculiar charm. It was a curved, long, pointed, slender tooth. He claimed it was a fossil tooth of an extinct non-avian dinosaur that belonged to the genus *Stegosaurus*. I do not have a clue about the real identity of such a tooth or tooth model, but I am quite sure it did not

belong to a *Stegosaurus*. In case it was indeed a dinosaur tooth, it looked more like it belonged to a non-avian theropod, a meat eater.

The landlord of the dojo where Enríquez worked decided to increase the amount of money that he charged to rent the dojo. Enríquez did not have enough money to pay for it, so he left the place. He did not rent any other dojo. What he did was to join another previously existing karate school of the same sports federation. All his students, including me, moved to the other dojo. This dojo was in Colonia del Valle. The son of the owner of the sports federation was the principal of this dojo.

The son of the owner did not believe that karate was a mystical discipline. On the other hand, Enríquez obviously thought it was a spiritual path. The son of the owner did not agree with the belief that karate was a sport. On the other side, Enríquez thought one of its aims was to improve our bodies. The son of the owner thought karate was a business to make a profit and nothing else than that. According to him, success meant making a lot of money by investing the least possible amount of money and effort. Enríquez became a disciple of the son of the owner. As a result, he turned into a lazy karate teacher. He stopped being interested in making sure that his students learned what they were supposed to learn. He also stopped believing in the spiritual side of martial arts.

The son of the owner had a daughter whose name was Lauren. She was my karate classmate. During sparring sessions, she was always matched against little girls who were younger than her, so she would beat them up easily and would always be the winner. In the new dojo, I met a boy named Daniel González, who was my classmate. I got on well with him. I also met there another buddy whose name was Maximiliano. He always played with his Game Boy in karate classes, especially the game "Wario Land" (1994). We both were great fans of Super Mario games. As we were gamers, we got on extremely well. In the new dojo, there was a mural painting that depicted two samurais. One of them was standing, and the other one was riding a war horse (*Equus caballus*). The one who was riding the charger was wearing battle armor. Maximiliano claimed these guys were video game characters. He said he knew their names, but I cannot remember the names that he told me.

At that time, I was totally addicted to the video games in the Super Mario and Donkey Kong franchises. I was so obsessed with them that every time I traveled on holidays with my family to Tuxpan to visit my uncle Jorge Reyes Mejía, I did not just travel with my Game Boy. I also traveled with my big SNES console so I could keep playing such games.

Not far from my house, there was a church known as Iglesia de la Conchita. This is the place where the oldest Catholic chapel of

Mexico City was built, as it was commissioned by Hernán Cortés. The church that currently stands there was built later. People claim that the ghost of a woman known as Malinche haunts the church and the square in front of it. Malinche was the interpreter of Hernán Cortés during the Spanish conquest of the Aztec Empire.

Each year, on the Feast of the Immaculate Conception (8th of December), there is a big patron saint festival to venerate the Virgin St. Mary of the Immaculate Conception in that church. At such festivals, there used to be an outstanding show of fireworks. I loved to go to such events that happened on the day before my birthday. I was afraid of the blaring and luminous fireworks, but they looked beautiful and fantastic. Each year, there was a fireworks castle. A fireworks castle is an enormous tower, composed of wood frames, that has plenty of fireworks attached to its whole surface. It has wheels that move swiftly when their fireworks are activated. The fireworks of the castles were not activated at once; different parts of the castle were activated in sequential steps. The art installations that were contained within the castles included sculptures made of fireworks that resembled Catholic religious images or non-human animals, such as colorfully dazzling peacocks (*Pavo cristatus*). During one such fireworks display, I saw how a tree (*Fraxinus uhdei*) caught fire with the fireworks.

Now, I shall explain what the Immaculate Conception is and why it is celebrated by Catholics. In the "Gospel of James," it is stated that the Virgin St. Mary was miraculously born. Her mother St. Anne gave birth to her without having had sex before her conception. This gospel was not very popular among Christians, so Coptic Pope St. Athanasius I of Alexandria, and Roman Pope St. Damasus I did not include it in their biblical canons.

In the Manichaean religion human sexuality was sinful. This religion from Sassanid Persia syncretized Abrahamic religions with Eastern religions such as Zoroastrianism, Jainism, and Buddhism. As St. Augustine was Manichaean before becoming a Christian philosopher, he made plenty of Manichaean dogmas and traditions fashionable in ancient Christianity. These Manichaean ideas included the sexual nature of Original Sin. That is why it was important for later Catholics to reject any possible sexual sin involved in the birth of Mary. That is why Catholics celebrate the immaculate conception of the Virgin. They perform this ritual feast to make the Virgin purer in their minds through accepting the Manichaean faith that satanizes sexual lust, even if they are not Manichaeans.

The rejection of sexuality of Manichaeism and Catholicism comes from Jews who lived in Alexandria, Egypt, before Jesus was born. This theology developed during Ptolemaic times when the Greeks ruled Egypt.

Hellenistic Alexandrian Judaism was a totally different religion from modern Rabbinic Judaism. It has disappeared, but it was very influential in the development of other religions. The Jewish sages syncretized Greek Platonism, Osirian religion, and Zoroastrian Persian magic with Judaism. Alexandrian Hellenistic Judaism was a strong influence in the creation of Christianity, Gnosticism, Mandaeism, Hermeticism, Manichaeism, and Islam. According to Hellenistic Abrahamic thinkers of Alexandria, the Zoroastrian principles of good and evil do exist. They associated good with whatever was spiritual and eternal. They associated evil with whatever was material and liable to decay. Hence, according to them, the spirit was the good part of humans that strived toward virtue. Oppositely, the body was the evil part of humans that strived toward sin. Modern synagogues do not teach this, but you can read "De Gigantibus" by Torah scholar Philo of Alexandria, so you can learn. Based on these ideas, some Christians and Gnostics defined sex as a procedure to trap divine spirits to imprison them in impure, unclean bodies. This is a reference to the act of human conception through coitus, so new humans can be made and hence live at the mercy of evil in this world, full of sins, that is reigned over by the Devil. That is why Abrahamic religions ended up disliking sex. That is also why sexual abstinence became so important in the following centuries in the Manichaean and Catholic priesthood. That is why, even nowadays, people ban human nudity and sexuality. That is a form of self-hate because underneath our clothes, we are all naked and have sexual organs.

The world is now secular, but this form of self-hatred shows us that the same metaphorical religious demons keep possessing us. In our secular world, the Deities have left, but the demons have stayed. I agree there are plenty of bad things in this world that simply cannot be changed because of human nature, but we should not blame sexuality or the whole human body for that. The only parts of the human body that are to blame are the genes that predispose us to have the neural circuits that make us act in vile ways. But they do not have anything to do with sexual reproduction or the skin as it is seen in naked bodies.

My grandfather Tomás lived a happy life in Cuernavaca. The gardens at his house were superb! He loved gardening and spent most of the time taking care of his plants. The most magnificent plant species in his house were the avocado (*Persea americana*), the Madonna lilies (*Lilium candidum*), the queen palm (*Syagrus romanzoffiana*), the bananas (*Musa* x *paradisiaca*), the poinsettias (*Euphorbia pulcherrima*), the loquat (*Eriobotrya japonica*), the common guava (*Psidium guajava*), the mango (*Mangifera indica*), the Mexican lime (*Citrus* x *aurantiifolia*), the lemon (*Citrus* x

limon), the mandarin orange (*Citrus reticulata*), the white sapote (*Casimiroa edulis*), the tropical hibiscus (*Hibiscus rosa-sinensis*), the lesser bougainvillea (*Bougainvillea glabra*), the tea plant (*Camellia sinensis*), the Arabic coffee (*Coffea arabica*), and the blue jacaranda (*Jacaranda mimosifolia*). (To know why some trees, have an "x" in the middle of their names, please see the glossary.)

One day, Enríquez and another instructor named Toñito organized a one-day training camp on Mount Ajusco. All their students hiked up the volcano with them. That day, I started to learn ecology, not from books, but from nature itself! I noticed clearly how altitude changed the temperature and how plant life changed as well. First, there was the Pedregal de San Ángel scrubs living over the lava field. As we went up the Carretera Picacho-Ajusco avenue, *Quercus* forests were found there. Suddenly, there was a site on the highway where the temperature suddenly changed. It went from temperate to cold. At that spot, plant life changed from a *Quercus* forest to a *Pinus* forest. Further up beyond Mount Xitle, the plant life changed to an *Abies* forest. We hiked up Mount Ajusco from that ecosystem. The most common wild plant there was a thick shrub named *Roldana angulifolia*. These bushes painted my white karate uniform a slightly green color just by moving through them. My aunt Luisa also hiked the volcano with me. She accidentally touched a heartleaf nettle (*Urtica chamaedryoides*). That was a painful experience for her! As an antidote for her pain, a woman in Cabaña la Palapa, the restaurant at the base of the trail, placed on her hand another plant known as *Ageratina petiolaris*. What was most surprising for me was reaching the top of Mount Ajusco, because I hiked up beyond the tree line, so I noticed by myself how, at a certain height, trees were unable to grow. That day, Enríquez hiked with his lover, a professional ballet dancer. They seemed to love each other a lot.

At the end of 1993, a new museum was inaugurated. This was the Papalote Museo del Niño in the park known as Bosque de Chapultepec. It was a splendid science museum. It had a replica of a *Brosimum alicastrum* tree. This exhibit was known as "Árbol Ramón." This tree was full of sculptures of the fauna of tropical rainforests. I loved that exhibit—it was fascinating! In the uppermost part of the tree, there were sculptures that resembled a gray four-eyed opossum (*Philander opossum*), a cacomistle (*Bassariscus sumichrasti*), and an ornate hawk-eagle (*Spizaetus ornatus*). To go to see them, one needed to exit the exhibit by throwing oneself through a horrible waterslide, but there was no pool at the end. It was just a scary, narrow-curved tube. But I of course willfully went inside of it, as it was worth it to see the eagle sculpture! Not all the current sculptures in the tree exhibit existed

in 1993. Moreover, the arrangement of the sculptures was changed in 2014.

During the holiday season, my mother and I visited Papalote Museo del Niño; Universum, Museo de las Ciencias; the Jardín Botánico del Instituto de Biología de la UNAM; and the Museo de Historia Natural de la Ciudad de México (please see Appendix C for a description of this last museum).

The exhibits that I loved the most in the science museum known as Universum, Museo de las Ciencias, were the periodic table installation with real-life element samples, the fluorescent minerals, and the corpse of the amblypygid (*Acanthophrynus coronatus*).

On Saturday the 1st of January 1994, an important international agreement came into force. It was the North American Free Trade Agreement (NAFTA). Mexico, the United States of America, and Canada became part of a trilateral trade bloc. This event was a historical landmark that signaled the triumph of neoliberal international politics in Mexico. As a result of this event, a paramilitary army declared war on the government of Mexico in the State of Chiapas, Mexico. This insurgent army was known as Ejército Zapatista de Liberación Nacional (EZLN). The leader of this rebel army was a masked man whose nickname was Subcommander Marcos. He was against international free trade. He wanted Mexico to be economically isolated from other countries. He also fought for the rights of Indigenous Peoples, which is why he named his army after Emiliano Zapata. I was terrified by Subcommander Marcos. I thought he would trigger a civil war in all the states of Mexico. My mother calmly told me that Marcos was financed by the government of Mexico to scare Mexican voters. In that way, the government could control the results of the upcoming presidential elections of 1994. After several months, I noticed that Marcos was a mere demagogue like all the other politicians that were governors or members of congress. As all of them, he made a lot of promises but never fulfilled them. He never triggered a war in all the states of Mexico, and he never improved the social and economic conditions of the Indigenous Peoples of Chiapas. As I was not afraid of him anymore, I bought a toy that was an action figure of Subcommander Marcos.

Jurisprudence

Núria acted wrongly. Enríquez considered that whoever has authority over other people needs to rule by being a moral leader. These leaders are admired and worshipped by their disciples. The hegemony of such leaders is derived from their virtue and charisma. On the other hand, Núria showed her superiority over me by displaying violence such as the verbal abuse entailed in

mocking me and the psychological abuse entailed in not listening to me. That is not the way to rule people. That is how a tyrant rules slaves, not how a righteous prince rules the free citizens of a city.

My father acted wrongly according to the doctrine of Enríquez. My father lied to my mother by telling her that he loved her to attain a better social class. According to the teachings of Enríquez, it would be better to be a pauper than live as a rich person that acquired great wealth by emotionally hurting an innocent woman. According to the teachings, if my father did not love my mother, he should have divorced her. After this, he could start his romantic relationship with Nora.

Nora also acted wrongly by starting a sexual relationship with a man that was married and had a son. According to the doctrine of Enríquez, she should not have acted as she did to avoid hurting my mother and me. According to Enríquez, a virtuous person ought not to hurt other people to attain empowerment.

Lidia and Consuelo were righteous persons according to the doctrine of Enríquez. The reason is that their authority was based on producing pleasure instead of pain in their students. Their virtue was not displayed in the quality of the pleasure that they produced in their pupils, but by demonstrating that it is possible to be a shepherdess of men through justice instead of vileness.

According to the teachings of Enríquez, the rainmakers that live in the mountainsides of the volcano known as the Most Holy Popocatépetl act righteously. The reason is that they do not obtain rain through scientific means but by using magic. According to Enríquez, the practice of magic is a moral virtue. Using magic for such a noble aim as producing rain to grow maize (*Zea mays*) in agricultural land is an even holier practice that should be performed by every fair person.

Enríquez thought it was logically consistent to mix Eastern tantra with Abrahamic religion. Thus, he would approve the cultural appropriation of Zoroastrian theology that was performed by ancient Christians. This appropriation started with one of Christianity's oldest texts, the "First Epistle to the Thessalonians" by St. Paul the Apostle to the Gentiles. According to Enríquez, magic is One; it does not matter who is the human user of such universal power. Hence, all religions practice it righteously. As there is just One magic in the universe, it is right to syncretize the magical traditions of different religions to create the magical system that anthropologist Lévi-Strauss would refer to as a cultural "bricolage."

According to the teachings of Enríquez, the fact that malware exists is not the result of

great human cultural development. Oppositely, it is the result of the human spiritual deficiencies that make people act in ignorant ways and harm other humans. Even if this harm is done using high technology, it is still a primitive and ignorant action made by people that do not know what is truly good in life.

According to his other teachings, it would also be right to worship our dead ancestors as it is done on the Day of the Dead. They deserve as much respect as our living ancestors. Death should not be an obstacle to reaffirm our values of loyalty and obedience toward such people who lived in this world before us. This does not necessarily benefit the dead in any way, but it is something beneficent for us, as it allows us to practice a work of religious piety. The worship of the dead does not give us any rewards, but practicing such acts is a virtue. All virtue is beneficent for us.

According to the teachings of Enríquez, my great-great-grandmother should not have commanded my grandmother to perform the futile attempt of trying to exorcize the owl (*Bubo virginianus*). If the divine beings already decided that it was the right time for her to die, then she should have acted with resignation and accepted the divinely commanded fate that was assigned to her. She should have done that because of the loyalty and obedience that she ought to have toward the divine beings. The premise of her duty to be loyal and obedient is that the divine beings gave to her all her gifts and possessions, even her own life.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 6. *ALGANSEA BARBATA*

During fourth grade, I felt ready to go on the school camping trip with my classmates and the other students from my school. I went camping at the house of Headmaster Daniel Villagrán. Such a house was in Temixco, Morelos. I can remember that the camping trip happened on the day after presidential candidate Luis Donaldo Colosio was assassinated. His death was the most important news on television. On the day of the camping trip, I went with my schoolmates to Jungla Mágica, a park in Cuernavaca that is now known as Barranca Chapultepec. This park in Cuernavaca is not the same park known as Bosque de Chapultepec in Mexico City. They just have the same name. After visiting the park, we swam in Daniel Villagrán's house's swimming pool. In the swimming pool, Sara, a schoolgirl who was studying in a lower grade than me, spent all the time stating premises to convince me that she was a mermaid.

Mermaids are female water (H_2O) spirits. They are alleged to have supernatural powers. It is claimed that Lake Chapala, Jalisco, is the home of a Goddess named Tatei Xapawiyeme. Wixárika Indigenous People pray to Her in modern times. They present holy offerings to Her in Isla de los Alacranes, Her island sanctuary at Lake Chapala. By doing so, they ensure rain in their agricultural farm plots. Both the pagan Wixárika and the Catholic Mestizos believe She exists, but the Catholic fishermen who have met Her say that She is a mermaid.

It is claimed that in Tlaxcalancingo, Puebla, there was a mermaid Goddess whose name was Cihuapili. She gave water to the peasants in exchange for religious offerings. The rainmakers of Atlixco, Puebla, wanted the water for them, so they kidnapped the mermaid. Since then, water stopped being produced by the Tlaxcalancingo springs. Atlixco became extremely fertile thanks to the mermaid that lived among the townspeople from there. It is also said that another mermaid lives in Ciénegas de Lerma, State of Mexico. Her name is Tlanchana. She is the mother of all the aquatic animals of the lakes. Due to that, all the fishermen get their source of income thanks to her. Some of her children are the fishes (*Algansea barbata*, *Aztecula sallaei*, *Chirostoma riojai*, *Chirostoma humboldtianum*, *Girardinichthys multiradiatus*, & *Goodea atripinnis*). Her other children are salamanders (*Ambystoma lermaense*), frogs (*Lithobates montezumae*, *Lithobates spectabilis*, *Dryophytes plicatus* & *Dryophytes eximius*), snakes (*Thamnophis melanogaster* & *Thamnophis eques*), and dwarf crayfish (*Cambarellus montezumae*).

***Algansea barbata* Álvarez del Villar & Cortés, 1964 (Cypriniformes: Leuciscidae)**

Illustration made by Aslam Narváez. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 855.**

According to an ancient legend, Acihuatl, the mermaid from the Basin of Mexico, abducted the king of Azcapotzalco in pre-Columbian times. As compensation, the mermaid sent a tray of vegetables to the king's wife every day. My mother used to buy plants that were sold by Julián Santana, a farmer from Xochimilco. He was the founder and designer of the famous art installation known as Isla de las Muñecas. Before dying, he claimed that Acihuatl was frequently calling him to request that he would follow her. According to the people of Xochimilco, the mermaid finally charmed him and abducted his soul... During the reign of dictator Porfirio Díaz, an aqueduct was built from Xochimilco to the center of Mexico City. This aqueduct was 36 m away from my house before I was born. When the engineers wanted to extract water from the spring of Santa María Nativitas, Xochimilco, they were unable to. Acihuatl appeared to them and told them that they needed to sacrifice a guy for her. They killed a teenager and were able to extract the water.

There is a tree known as *Crescentia alata*. Its fruits are cut to make certain containers known as jícaras. At Lake Zirahuén, Michoacán, it is said that a mermaid haunts the beaches of the lake at nighttime. She can be seen there, bathing herself, totally naked. To bathe, she throws water from the lake over her head and body using a jícara, which she also uses as bait to drown people during the daytime. The reason why the jícara is so appealing is that it is embellished with gold and artistically painted. It can be seen floating on the lake's surface, and the victims follow it until they drown in the lake, where they are then kidnapped by the mermaid. They are carried to the mermaid's palace, as she is the princess of the lake.

In Aljojuca, Puebla, a very beautiful young maiden who was a shepherdess started to dig a small spring that she had found. The amount of water that came out of it was so enormous that the spring became an axalapasco (a maar, a volcanic crater in the ground with a lake inside of it). The shepherdess took off her clothes until she was completely nude. She let her hair down, and she became a mermaid. It is claimed that the changes in the color of the Aljojuca axalapasco throughout the year reflect the emotions that the mermaid feels.

There are also European and Arab merpeople. They are fish-tailed anthropomorphic spirits from ancient Mesopotamian religions. In Sumerian mythology, God Ninurta fought against a mermaid. In Babylonia, they were magical water deities. In the Graeco-Roman Olympian religion, they were trident-wielding subjects of God Poseidon, the lord of the seas. At the same time, in Mesopotamia, Goddess Atargatis was worshipped as a mermaid. In European Renaissance alchemy, the mermaid was a symbol used in emblems that were allegories

of chemical syntheses. Very often, she is an allegory of the transition state supposedly found when sulfur and mercury are the reagents purportedly used to produce a metal. If you add powdered sulfur (S_8) to mercury (Hg) at 25 °C, you will produce mercury (II) sulfide (HgS). This is a salt, not a metal, so no metal is made from sulfur and mercury. However, in old times, alchemists believed all metals are formed by the combination of sulfur and mercury. Alchemy was, of course, not only physical. According to wizard Zosimos of Panopolis in his epistle titled "On the Letter Omega," it was a spiritual path toward divine transhumanism. Zosimos was a Gnostic, and in Valentinian Gnosticism, the bridal chamber is analogous to the alchemical marriage described by the most blessed Mary the Jewess while describing the creation of the philosopher's stone. So, the mermaid would be a symbol of infusing the earthly with a divine principle (**page 13**). During times of European colonialism, some Europeans mistook dugongs (*Dugong dugon*), African manatees (*Trichechus senegalensis*), and West Indian manatees (*Trichechus manatus*) for mermaids. At that time, some fake rogue taxidermy hoaxes were also sold as mermaid specimens.

During the night of the camping trip at Daniel Villagrán's house, we roasted marshmallows and pig (*Sus domesticus*) sausages over a campfire in the house garden. We spent the night inside camping tents in the same garden. In the early morning, Rafael wanted to scare us by telling us that a wild wolf (*Canis lupus*) was going to kill us. I told him that the Mexican gray wolf was an endangered subspecies that was at risk of extinction. I added that in Mexico, there were few remaining wild individuals living in La Michilía, Durango. I also said that there are no wolves in Temixco.

Camps for kids are traditional in the United States of America. They were unheard of in Mexico a few decades before I went on the school camping trip. I think our camping experience was a bit sad. All of us were feeling miserable because we were far away from our homes in an unknown place. My schoolmates were so sorrowful that they used to sing a depressing song titled "Canción Mixteca" by José López Alavez (1915) in groups. The worst situation was not that. The most unfortunate event that happened during that ill-fated camping trip was that all the children ended up becoming ill. We suffered from infectious gastroenteritis. It was caused by all sorts of bacteria and parasites that attacked us at once. When I went to see Dr. Octavio Martínez Natera, he found that I was being infected by *Shigella flexneri*, *Entamoeba histolytica*, and *Hymenolepis nana*. All these species of pathogens were infecting me at the same time! After that disease outbreak, the school stopped organizing camping trips.

Every time I suffered from infectious gastroenteritis, my mother used to heal me with herbalism and allopathic medicine at the same time. She used to give me an herbal remedy that was an infusion of spearmint (*Mentha spicata*) and German chamomile (*Matricaria chamomilla*).

On Wednesday, the 6th of April 1994, the presidents of Rwanda and Burundi were assassinated in Africa. This historical event triggered the Rwandan genocide. Plenty of people died, horribly murdered.

That year, I had a bicycle accident. The tip of my right middle finger suffered a deep cut. It was cut with the wheel spokes. Fortunately, a surgeon stitched the injury. Since then, I have only ridden a bicycle thrice and not more times. Before that accident, I did not remember which of my hands was my right hand and which one was my left hand. As I knew that my injury happened to my right hand, I then knew which was my right hand.

I went with my mother and my aunt Luisa to a cinema theater to watch a film, "The Lion King" (1994). I loved that movie so much that it became my favorite film. The movie plot is exceedingly refined. It has a similar quality as an ancient Greek tragedy or as a William Shakespeare play. The film is about a king who was assassinated by his brother to usurp the throne. The young prince takes revenge on his uncle when he grows up. Thus, the legitimate heir to the throne becomes king.

Nora, my father's paramour, was a woman with an unstable personality. Sometimes, she was euphoric and laughed out loud for anything. At other times, she was extremely furious and verbally abusive. She loved drinking drinks with ethanol (C_2H_6O) and taking illegal drugs. Her favorite pastime was watching soap operas on television. She loved everything that was expensive, luxurious, or ostentatious. There was nothing more important for her than having lots of money and expensive objects. Nora believed that anything made in Mexico was inferior to American stuff. She felt an excessive admiration for anything that was American. She was an immoral woman who was ready to do whatever she could to attain her dreams. It did not matter how bad the actions she needed to do to achieve her dreams were. Despite this, she was a devout Catholic who always prayed to Jesus and to the Virgin St. Mary of Guadalupe. She was an utter hypocrite because she did not live following the ethical teachings of the biblical "New Testament." My father used to spend most of his free time with such a bitch. My father did not visit my mother and I every weekend. However, some weekends, he did visit us. That is something that Nora disliked.

On the weekends that my father visited my house, I used to go on picnics with him, my mother, and my aunt Luisa. Our picnics

took place in several places in the State of Mexico. We always ate roast chicken (*Gallus gallus*) during such meals. The most exciting place where we went on a picnic was a lake known as Laguna del Sol in the crater of a huge volcano. The name of this volcano is Nevado de Toluca. It is found in the State of Mexico. At that time, tourists were allowed to drive their cars all the way to the summit of the volcano. The uppermost part of Nevado de Toluca has a unique landscape! It is an alpine tundra full of Mexican sea hollies (*Eryngium proteiflorum*). On such day trips, I used to watch wild birds with my Hansa 7x50 ZCF binoculars. I saw plenty of lifers! Some of the most charming birds that I saw in my day trips to the State of Mexico and Morelos were the squirrel cuckoo (*Piaya cayana*), the Rivoli's hummingbird (*Eugenes fulgens*), the bumblebee hummingbird (*Selasphorus heloisa*), the Swainson's hawk (*Buteo swainsoni*), the acorn woodpecker (*Melanerpes formicivorus*), the peregrine falcon (*Falco peregrinus*), the Steller's jay (*Cyanocitta stelleri*), the bridled titmouse (*Baeolophus wollweberi*), the yellow grosbeak (*Pheucticus chrysopeplus*), and the indigo bunting (*Passerina cyanea*).

On other weekends, my family and I used to visit zoos such as Zoológico Zacango in the State of Mexico or Zoológico Zoofari in Morelos. The exhibit that I loved the most in Zoológico Zacango was its monumental aviary. Birds could be seen quite close to visitors in this place. Some of the most outstanding species of Zoológico Zacango were the white rhinoceros (*Ceratotherium simum*), the wapiti (*Cervus canadensis*), the Burmese python (*Python bivittatus*), the swan goose (*Anser cygnoides*) and the Egyptian goose (*Alopochen aegyptiaca*). Zoológico Zoofari was a drive-thru safari park. The best thing about this wildlife park is that visitors can feed the animals. Some of the most outstanding species of Zoológico Zoofari were the large flying fox (*Pteropus vampyrus*), the crested porcupine (*Hystrix cristata*), the southern cassowary (*Casuarius casuarius*), the southern screamer (*Chauna torquata*), and the coscoroba swan (*Coscoroba coscoroba*).

Paula Cusi was the wife of the owner of Televisa, the most important television network in Mexico. She made a documentary titled "Nefertari en la Eternidad" (1993). The documentary was about the tomb of Nefertari Meritmut, a queen consort from Pharaonic Egypt. I watched this documentary on television. The documentary showed the mummified remains of King Ramesses II, Nefertari's husband. Such a stimulus triggered my post-traumatic stress disorder, as expected. I was again suffering nightmares, melancholy, and thoughts about death.

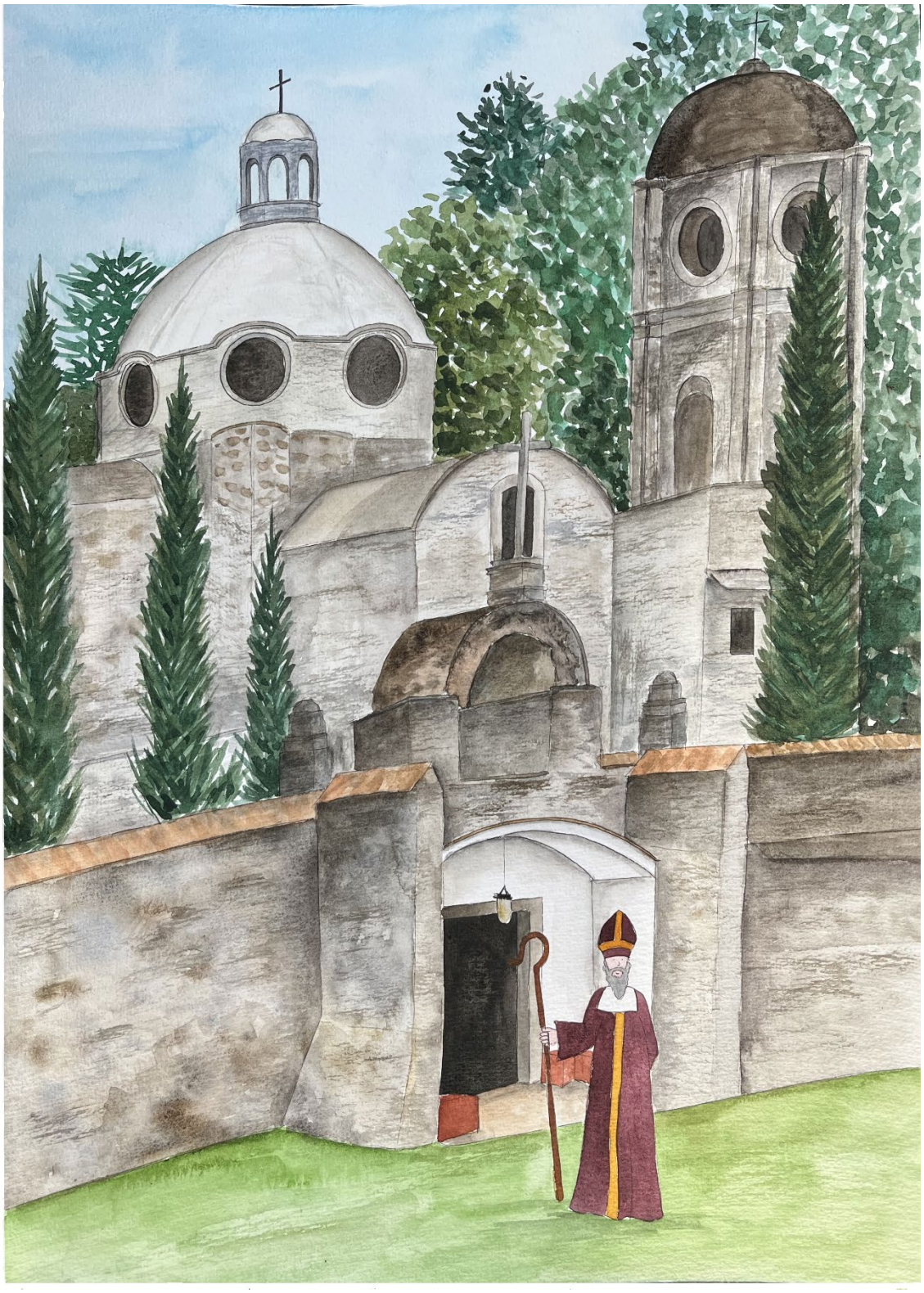
When my mother was a kid, she was afraid of the ghostly person who dwelt in the top-floor bathroom mirror in my grandparents' house. I learned to fear such a person. When

it was night, and everything was dark, and I wanted to go inside the bathroom, I used to turn on the light by only inserting my arm inside the door while the rest of my body was in the adjacent bedroom with the light turned on. I did this to avoid staring at the bathroom while it was dark. I was afraid of seeing someone that I would regret seeing, such as a wraith or a monster.

As a symptom of the episode of espanto or susto that was triggered by watching "Nefertari en la Eternidad," one day, I imagined that someone in the mirror talked to me. That stranger told me that I should be ready for an important change in my life.

My sightseeing day trips with my parents and my aunt Luisa were normal occurrences. Nevertheless, there was a day trip that was totally different. That day, we went to Tenancingo, State of Mexico. The Tenancingo day trip happened after I talked to the person inside the mirror on the same month. In the beginning, it was a normal sightseeing trip. We went on a picnic to a waterfall known as Salto de Santa Ana. Afterward, we went to a monastery in the mountains. It is in the middle of a *Pinus* and *Quercus* forest. This sanctuary is known as Santo Desierto del Carmen (18.912308002782883, -99.5548955607134). This moastery was built because there were too many lay people living close to Desierto de los Leones, the original monastery in Mexico City where the monks were living. The problem with living close to lay people was that they disturbed the peace that the monastics needed to practice their religious prayers, meditations, and readings. The monks moved to the new monastery, built on Mount Nixcongo, Tenancingo. In this place, they worshipped Our Lady of Mount Carmel. In Pharaonic Egypt, many centuries before the birth of the Virgin St. Mary, religious people depicted Goddess Isis carrying her son Horus. The first artistic depictions of the Virgin Mary were similar. She was depicted carrying her son Jesus. This tradition has continued even in modern times. The Virgin St. Mary of Carmel is still depicted in such a way.

In the monastery's church, I had a mystical experience. It was the first one in all my life, but not the last one. That mystical experience changed me forever. Mysteriously, my nightmares disappeared forever because of the experience. The symptoms of post-traumatic stress disorder, known as espanto or susto, also disappeared forever after that day. I felt as if some divine presence surrounded me and entered inside my body and inside my mind. It was as if it were an ethereal apparition made of the same thing ghosts are made of. The spiritual vision occupied all the air that surrounded me, so it did not look like a life form. It was full of shiny glitter, and it did not have even a single non-luminous gap. It covered me. It crossed my skin to enter inside my body because it could move through solid objects



Santo Desierto del Carmen, Tenancingo, State of Mexico, Mexico

Illustration made by Jo Herbert. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 855.**

without modifying their physical properties or appearance. It cleansed me. The voice then spoke to me. There are many people who take drugs who have similar experiences to the one I had that day. I do not need to take drugs to have them.

Nevertheless, I cannot voluntarily decide when to have them. Sometimes, I know events that will happen in the future before they happen because of such experiences. Such prophecies have always come true. I do not know if Enríquez trained me in any way so I could achieve such extrasensory perception. However, according to me at that time, my first mystical experience confirmed that everything Enríquez preached was true and that it was possible to have access to supernatural forces. The weirdest fact about my first mystical experience was that, according to Enríquez, the mystical practices of Eastern Dharmic religions allowed humans to attain supernatural power. Nonetheless, my mystical experience happened when I was inside a Catholic monastery, not inside a Hindu or Buddhist sanctuary. Even though I stopped having nightmares and melancholy after my first mystical experience, I continued suffering from respiratory illnesses during school exams. Yet, these diseases were, by far, milder than before.

Enríquez was never able to have any mystical experiences. Nevertheless, since then, the bathroom mirror has been associated with Enríquez and his teachings. Mirrors remind me of him because he taught his disciples the following wisdom: "Whenever you shall practice karate, do it in front of a mirror, as the opponents that you need to surpass are yourselves."

Leslie was a daughter of the son of the owner of the karate sports federation. Leslie wanted to marry. Leslie flirted with as many dudes as she could—and attempted to seduce as many guys in their twenties as possible in case one of them wanted to marry her. At the time, Enríquez had a sexual partner and lover. She was the professional ballet dancer with whom he hiked up Mount Ajusco. Enríquez decided to cheat on her by having sex with Leslie. Initially, he, of course, did not tell this to his significant other. However, one day, Enríquez told his lover what was happening. He informed her that he would stop being her lover because he got Leslie pregnant.

The ballet dancer was deeply hurt. She was sorrowful because the young man that she loved did not love her back. Moreover, this man suddenly broke up with her when she made her best efforts to be the best possible lover a man could want. Furthermore, he broke up to get married to another young woman that was never his significant other. According to the philosophy that Leslie's father taught to Enríquez, this was perfect. The son of the owner was pleased to see that Enríquez learned all his lessons well. Enríquez broke up with the young woman

he once loved to upgrade her with Leslie. The reason why Leslie was considered an upgrade in Enríquez's new way of thinking was that a relationship with Leslie meant a likely economic profit, as she would allow him to have a good job in her family's sports federation.

During the summer of 1994, I used to go to the dentist as I suffered from tooth decay. Dental caries is an infection caused by the acidic metabolites of bacteria, such as *Streptococcus mutans*, that live in dental biofilms. Close to the dental clinic, there was a gift shop where a soft toy that looked like a penguin (*Aptenodytes patagonicus*) was being sold. I showed it to my mother every time we went to the dentist because I thought such a toy was fascinating. One day, my mother arrived home with a bag that contained that soft toy. I decided to name it Camilo. Since then, he became my favorite toy. Everywhere I went, I was always close to Camilo. I loved playing with him, and I was so happy to sleep without any nightmares while I was hugging a wonderful plush toy, Camilo. I used to feel so safe when I was close to Camilo because I thought that he protected me from unclean spirits. That is why I used to spend all the time with him.

During fifth grade, my schoolteacher was Lupis Villagrán, the daughter of Headmaster Daniel Villagrán. She was a good teacher. She was hardworking, and I learned a lot from her lessons. At that time, there was a student studying in sixth grade whose name was Juan Rentería. I did not like Juan because he used to bully me. He was mocking me all the time.

When presidential candidate Colosio was assassinated, the new president of Mexico was Ernesto Zedillo, Colosio's substitute. As a result of the inefficient administration of President Carlos Salinas de Gortari, when Zedillo became president, there was a terrible economic crisis in Mexico that is known as Error de Diciembre or Efecto Tequila. It was so severe that it had bad effects on the economies of Brazil, Venezuela, Argentina, and Chile. Hence, Carlos Salinas and his political party, Partido Revolucionario Institucional (PRI), were hated by many Mexicans.

There was a famous and controversial Mexican psychologist who was a university professor. His name was Jacobo Grinberg. He was a researcher of paranormal phenomena. He mysteriously disappeared on Thursday the 8th of December 1994. Plenty of conspiracy theories emerged to explain why or how he disappeared.

On Christmas, Christians celebrate the birth of Jesus, the founder of Christianity. It is celebrated because according to them, Jesus was sent by God YHWH (Allah) to save humankind. That year, I played the protagonist in my school's nativity play. A nativity play is a stage play about the birth of Jesus. Alternatively, it can be about

events that supposedly happened at the time of Jesus's birth that were directly related to him. Most nativity plays are comedies. Alicia Villagrán taught me individually how to sing, so I could sing Christmas carols with a microphone as a soloist at the end of the play (such as the song by Franz Xaver Gruber that is titled "Stille Nacht, Heilige Nacht" (1818)). All this stuff was too stressful for me. Nevertheless, my mother and my aunts loved the nativity play that I hated so much.

The worst event regarding the play was that I was required to perform it twice. The first time, I played it in a theater known as Foro Cultural Coyoacanense. The second time, I played it inside the pavilion which is known as the "kiosco" in Plaza Hidalgo, the main square of Downtown Coyoacán. Unfortunately, the second time the play was staged, I suffered from a sore throat. Even with this malady, I played and sang.

Christmas time was very important in Escuela Félix Villagrán Escandón, my school. Every December afternoon, all the students sang Christmas carols (such as the Catalan song "Fum, Fum, Fum"). After my lessons finished, I used to go with my mother to the market known as Mercado de Coyoacán to buy Christmas ornaments. I still have fond memories of such afternoons.

On Wednesday, the 21st of December 1994, the volcano that is known as the Most Holy Popocatépetl erupted. The fumaroles that had been producing volcanic gases for the last two years were a sign that the volcano was again active.

Christmas was the happiest time at my house. My grandfather Tomás traveled from Cuernavaca to Mexico City to spend Christmas with us. He used to cook tamales for Christmas. A tamale is a dish made of flour from maize (*Zea mays*) that is wrapped inside a maize female bract. My grandfather Tomás used to cook them with different fillings. These fillings were a candy known as jamoncillo de pepita that is made from pumpkin (*Cucurbita pepo*), a candy known as acitrón that is made from giant barrel cactus (*Echinocactus platyacanthus*), or chicken (*Gallus gallus*) meat. My grandfather Tomás told us that no one should get angry while he was steaming the tamales. If anyone got angry at that time, then the tamales would end up not tasting as they should.

My grandmother Lorenza organized a posada. A posada is a Catholic Christmas party. The most important object of a traditional posada is a sculpture of the Virgin St. Mary riding a donkey (*Equus asinus*) that is being followed on foot by St. Joseph and a winged messenger spirit sent by God YHWH. This spirit is one of the so-called archangels (angel princes). This sculpture is carried by a procession outdoors during nighttime while all electric lights are turned off and all the people in the procession hold burning candles. The

people in the procession sing litanies during this ritual. When my family and I performed the procession, my dog (*Canis familiaris*), Pepa, followed us. We humans walked in a line, and the dog followed.

After this, the ritual of asking for posada is performed. In this ritual, half of the family goes indoors, and the other half stays outdoors. The half that stays outdoors has the sculpture and the burning candles. This ritual is a remembrance of the time when the Virgin Mary and St. Joseph were asking for a room to spend the night so Mary could give birth to Jesus, the founder of Christianity. The people involved in this ceremony sing a song known as "Letanía para Pedir Posada," which recounts what is written in the "Gospel of Luke" 7: 11 regarding the time when Mary was about to give birth.

Generally, my parents and my maternal grandparents went inside the house. My aunts and I were outside with the sculpture and the candles. The party ends by breaking a piñata that is full of food. The piñata is a container made of pottery clay that has seven cardboard cones and plenty of colorful pieces of paper pasted on it. It is hung from a rope. People attempt to break it with a stick one by one. In my house, the piñata was filled with pieces of sugarcane stems (*Saccharum officinarum*), peanut fruits (*Arachis hypogaea*), jicama roots (*Pachyrhizus erosus*), and oranges (*Citrus* x *aurantium*). (To know why the orange has an "x" in its name, please see the glossary.) When anyone broke the piñata, Pepa gathered peanut fruits that fell to the ground by grabbing them with her mouth. After this, she moved them indoors. My aunts then broke open the fruits to feed the seeds to Pepa. After the piñata was broken, my grandmother Lorenza placed a sculpture that depicted Jesus when he was a child over a shawl. My grandmother and I swung the shawl sidewards while the sculpture was lying on top of it. While we were doing this, we sang lullabies to Jesus to celebrate he was born.

The tradition of processions where sculptures were carried aloft already existed in Abydos, Egypt, in Pharaonic times. In such times, the sculpture of King Osiris, the Khenti-Amentiu, was carried aloft in a procession during the celebration of His mysteries that happened in the month of Koiak (between the 10th of December and the 9th of January). Afterward, the Greeks and the Romans did the same with the sculptures of the Olympian Deities, not only on Saturnalia but in all their religious festivals. In Catholicism, the piñata is a symbol that stands for the temptations of the Devil. In Abrahamic religions, the Devil is an evil archangel made by God YHWH. The Devil is a syncretic character that is based on Satan and Angra Mainyu. Satan is an angel of God YHWH in the Jewish "Tanakh" whose task is to tempt the righteous and to prosecute sinners before

God in the heavenly court. These sinners are the people who give in to temptation. God YHWH sends Satan to test people. Angra Mainyu is the enemy of God Ahura Mazda and humanity in the Zoroastrian "Avesta." The difference between these two characters is that Satan works as a faithful servant of God YHWH in the ancient Jewish religion of the "Tanakh," and Angra Mainyu is the rebel enemy that fights against God Ahura Mazda's authority in the Zoroastrian "Avesta." Both characters fused with each other in people's imagination when King Cyrus the Great, of Persia, ended the Babylonian captivity of the Jews. In this way, the Jews became subjects of the mighty Zoroastrian king of Persia.

The Devil is also based on an older character, the Mesopotamian demoness Lamashtu. In the Babylonian version of the "Book of Job," the book titled "Ludlul Bēl Nēmeqi," the hero's antagonist is Lamashtu. In the later biblical version, the antagonist is Satan. In ancient Mesopotamian religions, Lamashtu was banished from Heaven by the Anunnaki Deities, and now she spends her time working iniquity on Earth. If you want to read the legend of Lamashtu, the fallen angel, please see cuneiform text number 33 in the monograph by Falkenstein (1931) titled "Literarische Keilschrifttexte aus Uruk." This cuneiform text was found in Uruk, an archeological site in Iraq. In Catholicism, the seven cones of the piñata have a secret meaning. They are the seven hellish archangels, the enemies of the seven good archangels. Such evil persons are allegories of the deadly sins of Catholicism; that is why there are seven. In Zoroastrianism, the religion that is the origin of the Catholic mystery of the seven cones of the piñata, the good angels of God, who are the symbols of virtue, fight against the evil angels of the Devil, who are the symbols of sin. The faithful break the piñata using a stick while their eyes are blindfolded. This is a sacred symbolic struggle against evil that shows how the blind faith of true believers defeats the Devil's temptations. The fruit that falls when the piñata is broken is a symbol of the blessings that God YHWH gives to anyone who defeats the devilish temptations.

I really liked the art installations that depict Christmas nativity scenes with sculptures. These sculptures were handmade, and they showed the time right after Jesus was born. The first such art installation that I saw was the one made by my grandmother Lorenza close to the Christmas tree. A Christmas tree is a whole tree or a branch of a tree that is embellished with Christmas ornaments. The ones in my house were always cut trees that belonged to the species *Pseudotsuga menziesii*. Around Christmas time, I enjoyed walking with my aunt Luisa downtown to Coyoacán and to a park known as Viveros de Coyoacán. We went there to see all the Christmas nativity scene art installations that were found in house

gardens, public exhibits, and churches. I also used to walk to a church known as Capilla del Niño Jesús in Barrio del Niño Jesús. I really liked that church at Christmas time because a huge art installation, a Christmas nativity scene, was displayed there. That art installation was extremely gigantic! It was approximately 15 m long, larger than an adult *Tyrannosaurus rex*!

I was allergic to a bromeliad that is known as *Tillandsia usneoides*. This plant species is used as a substrate for traditional art installations that are Christmas nativity scenes and, in general, as a Christmas ornament. To avoid suffering from my allergy, I needed to avoid getting close to the leaves of this plant. In this way, I avoided inhaling the molecules that it produces.

Every year, in the months of December and January, the Mexican government celebrates Christmas. They did this by displaying colorful Christmas lights that showed Christmas scenes and symbols. I used to go with my parents one night each year in December to see the government's Christmas lighting in Mexico City's Zócalo, in Alameda Central, in Avenida Paseo de la Reforma, and in the Residencia Oficial de los Pinos.

The famous singer Selena Quintanilla was killed on Friday, the 31st of March 1995. Plenty of television shows mourned her death. If you want to listen to one of her songs, please watch "Selena – Amor Prohibido (Official Music Video)" (1994).

Enríquez gave in to temptation. He accepted all the temptations that the son of the owner offered to him. His desire to obtain power and money made him forget his spirituality. He also stopped believing in all the moral principles that he preached in the past to his students when he cheated on his lover with Leslie. This was to substitute the love of his significant other for money and power. The son of the owner started to reward his new disciple and son-in-law. It did not matter how good or bad Enríquez was. He always won every karate competition. This even happened when other karatekas were by far better than him.

The son of the owner ensured he always was the winner. Enríquez was allowed to sit with the sports federation directors in all exams and championships. One time, his first disciples, his students from his first dojo, were indignant when the son of the owner awarded the first place to him, instead of awarding it to Toñito. Toñito was obviously a better karateka, and he deserved first place more than Enríquez. He was a karate instructor that worked in the dojo. He and another guy named Sebastián were the real teachers of the dojo as all the lessons were taught by them—Enríquez did not bother to teach any lessons anymore. He was so important that he only attended the dojo to spend all the time talking with his father-in-law in the office.

Enríquez was awarded a bachelor's degree in veterinary medicine. He graduated from the prestigious Universidad Nacional Autónoma de México. He wrote a thesis on aquarium fishes. The same year he graduated from university; he organized a camping trip with the students of the dojo. We went to Maruata, a hippie beach in Michoacán. In that place, I slept in a camping tent for a second time. Enríquez idealized that beach a lot. It was not as good as he claimed it was. It seems to me that Enríquez was a kind of a hippie. That is why he believed in spiritual dogmas. Such were the very same dogmas he stopped believing and following due to the teachings of the son of the owner.

At the end of World War II in the United States of America, writers Allen Ginsberg, Jack Kerouac, and William Burroughs started a neo-romantic school of philosophy based on the Bohemian lifestyle, transcendentalism, and old-school romanticism. Kerouac referred to it as the Beat Generation. They promoted a counterculture based on the search for Eastern spirituality, sexual liberation, and the use of psychedelic drugs.

In the 1960s, many young Americans opposed the Vietnam War and the nuclear race between the United States of America and the Union of Soviet Socialist Republics. These young people thought that so much violence was a result of the failure of the dominant American culture, so they embraced the counterculture of the Beat Generation. Thus, they started the hippie movement that had its height of popularity in the 1970s.

To search for the spirituality suggested by the Beat Generation, the hippies appropriated some of the culture from India. They also obtained ideas from Tibetan, Chinese, and Japanese Buddhism. To perform the cultural appropriation of Eastern values, they followed a sightseeing itinerary to Asia known as the Hippie Trail. The relationship between hippies and nature was transcendentalist but hypocritical. The reason why their nature-loving ideas were hypocritical was because hippies harmed the environment as much as any human being that lived in a civilization after the Industrial Revolution.

It is impossible to live as a member of a modern civilization without harming the environment. Hippies wanted to live in communes where every aspect of living was based on peace and love. I was able to see one such commune in Maruata when I was a kid. As a result of the invention of the combined oral contraceptive pill (mestranol/norethynodrel), the hippies perceived sexual intercourse and reproduction as totally different biological functions. Therefore, sex was, for them, a pastime to attain hedonistic pleasure as the Beat Generation suggested.

In Hinduism, God Shiva (also known as Rudra in the "Vedas") is a God of storms, altered states of consciousness, meditation, prayer, yoga, asceticism, and philosophy. Hence, marijuana (*Cannabis sativa*) is one of His holy plants. Many Hindu sadhus that worship Shiva take marijuana. When Hindu philosophy was obtained by hippies through cultural appropriation, they also imitated marijuana ritual consumption. Following the ideas of the Beat Generation, the hippies also adopted the consumption of all the other recreational illegal drugs as a sacrament and later as a pastime to obtain hedonistic pleasure. Hippie spiritual guru Timothy Leary suggested that all his followers should take hallucinogenic drugs to expand their cognitive functions toward new forms of perception and to search for truth. Leary (1964) wrote this in his book titled "The Psychedelic Experience: a manual based on 'The Tibetan Book of the Dead'." To listen to hippie music, please play the following song: "John Lennon – Imagine" (1971).

In 1995, there was a severe epidemic outbreak of cholera in Mexico. Cholera symptoms include diarrhea and vomiting. It is caused by the bacterium *Vibrio cholerae* when it bears in its genome the prophage of bacteriophage CTXφ (*Vibrio virus CTXphi*). I was terrified by such an epidemic outbreak and every evening in my daily prayer, I asked God YHWH to please allow that I do not contract cholera.

Enríquez, Toño Barrera, Maximiliano, Joel, and Miguel loved fighting video games. They were great fans of the franchises Street Fighter and Mortal Kombat. Enríquez was even a cosplayer that dressed up as characters from both franchises. I bought the game "Mortal Kombat 3" (1995). My waifu was Sonya Blade. The actress who played her in the video game was Kerri Hoskins. I really liked that such a beautiful young woman was wearing a skimpy outfit all the time. I guess that was the first time I felt sexually aroused.

In the last year of elementary school, our schoolteacher was an elderly lady who was the sister of the principal. Her name was Sara Villagrán. She hated the girls, but she respected and honored the boys. This schoolteacher loved drinking coffee (*Coffea arabica* or *Coffea canephora*). She made us drink coffee as well, but I did not like its bitter taste. That last year, the fifth and sixth grades were taught by the same schoolteacher in the same classroom. The only fifth grader was Karla. The students that were studying sixth grade were Toño Barrera, Jorge López, Emy Zazil, and I.

I got on more with the sixth graders. As the sixth graders, we were a remarkably fraternal group. We used to spend a lot of time together talking about ghost stories and demon stories. These stories resulted in apocalyptical narratives filled with religious fanaticism. All these conversations started because Toño Barrera suffered from

triskaidekaphobia and was very superstitious. He used to explain to us why we should fear all calendar days that were either Tuesday the 13th or Friday the 13th.

Afterward, some of us started to speak about the superstitions that we believed. We spoke about Ouija boards—these are games that have a demonic reputation—and about demonic possessions. One of our favorite topics was the second coming of Jesus (Parousia). The second coming of Jesus would lead to the final battle of the angels of God YHWH versus the angels of the Devil. This would be followed by the Final Judgement and punishments in Hell. We also prayed to God YHWH to exorcize any demons from our lives.

Sara, my schoolteacher, saw that I was highly interested in biology. Therefore, she gave me a popular science book as a birthday gift. She gave that to me on Friday the 8th of December 1995. It was the amazing book titled "Microbe Hunters" by Paul de Kruif (1926). It is about the fascinating history of microbiology! This book inspired a whole generation of molecular biologists!

My grandfather Tomás had a stroke. He then needed to use a wheelchair and was not able to go to his Cuernavaca house. The stroke was due to a blood clot; a so-called embolus blocked one of the arteries of his brain. Hence, neuronal death occurred in that brain region. My grandfather Tomás thus slept in a room on the ground floor, as he was not able to go upstairs anymore. He slept in the same room where the domestic workers Helena and Victoria slept before I was born. The domestic workers claimed that La Llorona haunted it.

My grandfather Tomás soon started to be terrified during the evenings because he claimed that a tlahuelpuchi haunted the place and that she visited him to scare him. Tlahuelpuchis are legendary women from the old lore of the Republic of Tlaxcala. It was said that they removed their legs during nighttime to leave their homes, flying in the shape of fireballs. They did this to look for normal people to suck their blood.

A few days after he had the stroke, I went on holiday with my parents to Cabo San Lucas, Baja California Sur, Mexico. There are two reasons why such a trip was noteworthy. Both events happened on a boat trip to visit the Arch of Cabo San Lucas, to watch the California sea lions (*Zalophus californianus*), and to see the sunset in the open sea. One of these events was the sighting of a creature that I saw in the sea. It looked a bit like a dolphin, but its body and face were different. I had never seen something similar.

This species of cetacean is known as *Mesoplodon peruvianus*. It was described as a new species by Reyes et al. (1991) in a paper titled "A New Species of Beaked Whale *Mesoplodon peruvianus* Sp. N. (Cetacea: Ziphiidae) from Peru." It was published in

"Marine Mammal Science" 7(1): 1–24. I saw it in 1996, so it was scientifically described five years before. The second noteworthy event of that boat trip was that, for the first time, I felt attracted to a non-fictitious girl. She was a teenage stunner that worked on the boat as the bartender. We talked to each other in a friendly and pleasant way. I thought she was very sexy and attractive because before the sunset, she was wearing only a bikini bra and shorts. Therefore, anyone was able to see her slender and sultry body. To approach her, I drank plenty of glasses of Coca-Cola as that was the only soft drink at the bar. Fortunately, drinks were unlimited, and they were included in the ticket price for the boat trip. After sunset, the girl covered her torso with a sweater. I never saw that girl after that day. That night, I suffered from insomnia because of drinking so much caffeine ($C_8H_{10}N_4O_2$). Caffeine is an ingredient of Coca-Cola, and that afternoon, I drank plenty of it.

Jurisprudence

Enríquez betrayed his own doctrine by following the non-consistent teachings of the son of the owner. He should not have given into temptation, but he chose to do so. He chose darkness instead of light. He was ready to lose his divine grace willfully. Sara, the schoolgirl that was younger than me, acted righteously by trying to emulate the mermaids, in accordance with the moral principles that Enríquez taught before becoming a disciple of the son of the owner. She wanted to transform into a water spirit that was superior to a mere mortal human. This was getting closer to divinity and to the natural order of the Universe. Thus, leaving behind the human condition. This was getting rid of humanity to attain the ritual qualities of a magical being. This was the central principle of the transhumanistic ideas of Enríquez before giving into temptation.

I acted righteously when I faced Rafael and publicly corrected his mistake regarding wild wolves (*Canis lupus*). In that way, I ensured that he would not scare his schoolmates. By using truth, I defeated falsity.

By doing so, I saved all the persons who were there from the fear that would originate from their ignorance and from following falsity. This is the way of following the path that was disclosed to me by lawgiver Enríquez before he fell into the clutches of the son of the owner.

Daniel Villagrán and his daughters did not act in accordance with the principles of Enríquez before his downfall. I know this because they did not protect the kids from gastrointestinal pathogenic bacteria and parasites. Whenever parents leave their

children in a school, the schoolteachers need to play the role of the parents. They need to take care of the kids as if they were their own children.

I was right when I decided not to go on any other school camping trips after the gastrointestinal infections that I suffered due to the camping trip to Daniel Villagrán's house. As lawgiver Enríquez used to tell us: "We ought to run away from whatever harms us."

He, of course, said that before he was corrupted by the son of the owner.

According to the teachings of Enríquez before his downfall, Nora acted wrongly by considering anything made in Mexico as inferior to anything made in the United States of America. This was not only wrong because Mexico was her motherland, but it was wrong because the quality of any product should not be judged on account of its origin, but its own characteristics to fulfill the aim of what was made. Nora's way of reasoning was self-delusion.

The teachings of Enríquez before his downfall were not an end in themselves. They were simply a means to attain a higher end. This means was the union of an earthly human with the loftier divine supernatural forces. If and only if humans would follow that path, then such people would be able to solve all their troubles miraculously. My ascent from the chthonic condition of suffering from espanto or susto to the divine condition of having a mystical experience in Santo Desierto del Carmen was an achievement of Enríquez's teachings before his downfall. Enríquez transformed the spiritual earth within my soul into spiritual fire. He transformed the ashes into the Phoenix! That is how I obtained my first divine graces. Poor, miserable Enríquez! If he had just waited one more year, then maybe these blessings that entailed supernatural gifts would have been awarded to him—but the son of the owner transformed the spiritual fire of Enríquez's soul into spiritual earth. He calcined Phoenix and transformed it into ashes! I ascended while the lawgiver descended.

According to the teachings of the lawgiver before his downfall, Juan Rentería was an ignorant person, as mocking people only harms them. It does not edify them. He ought to have learned how to build, not how to destroy.

Practicing Christmas rituals should be a compulsory activity according to Enríquez's teachings before his downfall. These rituals introduce children to spiritual truths in a simple and comprehensible way. Such truths can only be fully mastered with time and learning. These spiritual truths change behavior by leading to prosocial attitudes in the case that they are well understood by the moral agent.

According to the teachings of Enríquez before his downfall, the American hippies

that took illegal drugs acted wrongly. Enríquez used to think that loyalty to one's government is of foremost importance. Therefore, American hippies should have practiced the virtue of being loyal to the government of the United States of America. Hence, they should have followed the laws of their country by not taking any illegal products. It is likely that consuming entheogens was a gateway toward divinity. However, what is the use of divinity if one lacks virtue? Is not virtue a way to access divinity in our own everyday life? Virtue is a more excellent way to access divinity than taking drugs. Drugs come from outside of us whereas virtue comes from within our souls. We may not have access to drugs all the time, but we can always behave virtuously.

Toño Barrera, Jorge López, Emy Zazil, and I loved ghost stories. Talking about such topics was a suitable pastime according to the teachings of Enríquez before his downfall. Our ghost stories led us to mystic and secret practices that allowed us to practice contemplation. They were not like Rafael's wolf (*Canis lupus*) stories, as the only aim of such narratives was to produce an irrational fear in people that was only based on ignorance.

My grandfather Tomás acted righteously when he feared the tlahuelpuchi, in accordance with the teachings of Enríquez before his downfall. Indeed, spiritual threats can harm us as much or even more than physical ills. The spiritual harm that the son of the owner did to Enríquez was more injurious than the physical harm that *Shigella flexneri*, *Entamoeba histolytica*, and *Hymenolepis nana* did to me on the camping trip at Daniel Villagrán's house!

Part Two

The Doctrine of Emilio the Sage

"Life is very hard, admired friend. Luckily, we have the gift of the storytellers of the Jemaa el-Fnaa square, even the gift of the snake charmers. I imagine that wisdom of the Berbers, who have been in the middle of the square since the Middle Ages telling those stories that make up their world."

—Emilio the Sage

***Naja haje* (Linnaeus, 1758) (Squamata: Elapidae)**

Illustration made by Camus Altamirano. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 856.**

Portrait of Emilio the Sage

Illustration made by Glam Beckett. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 856.**

***Homo sapiens* Linnaeus, 1758 (Primates: Hominidae)**

Illustration made by Hugo Arboleya. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 857.**

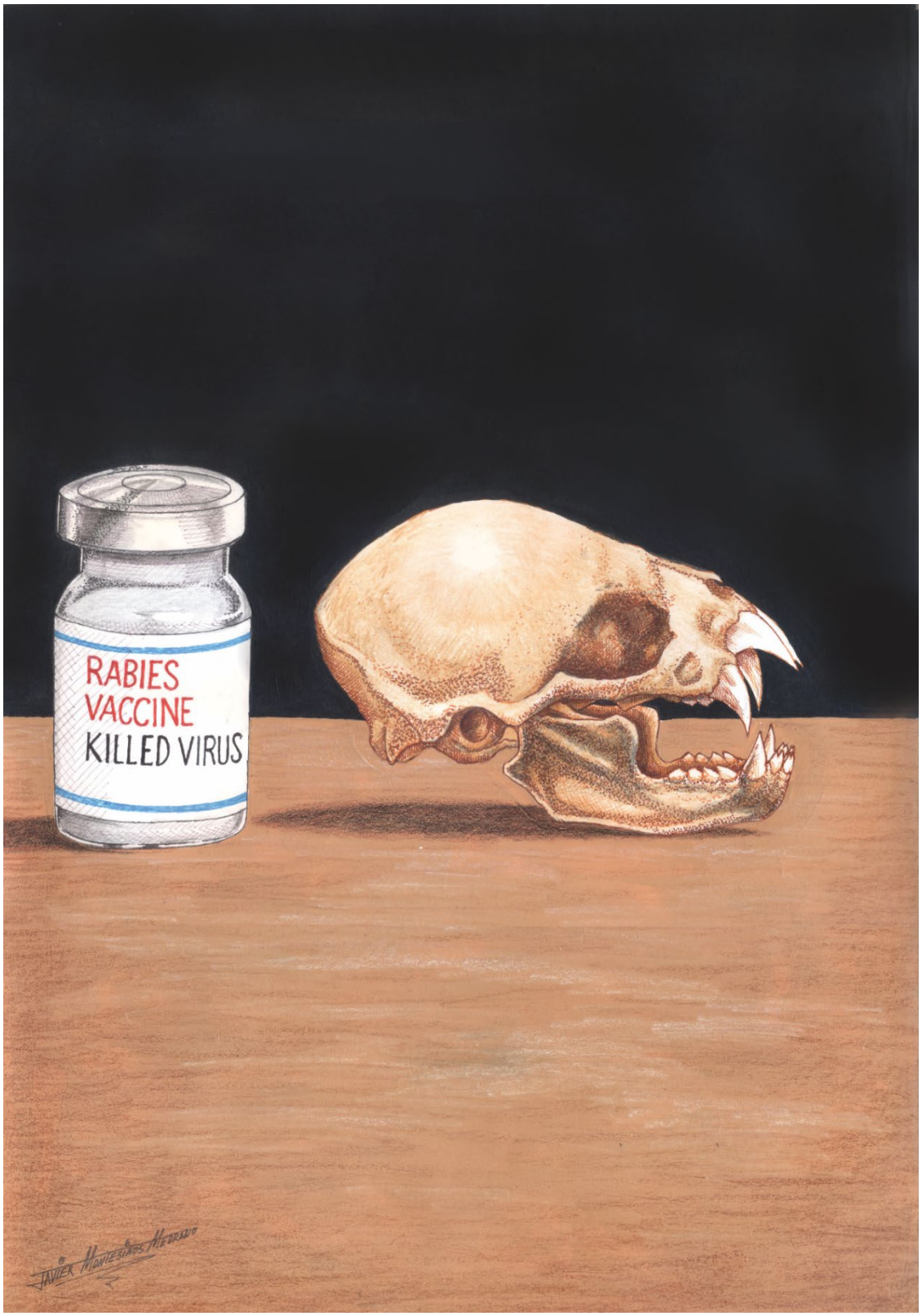
CHAPTER 7. *DESMODUS ROTUNDUS*

At the beginning of 1996, the Mexican government saturated all the newspapers and television news programs with news stories about an evil serial killer known as the chupacabras. It was claimed that he was not human but an extraterrestrial demon that looked like a bat. It was a sort of vampire bat (*Desmodus rotundus*) that was humanoid. According to journalists, it drank the blood of its victims until fully draining all their circulatory systems. In the original Puerto Rican urban legend of 1995, the chupacabras was not able to fly, nor did it have any wings. It is likely that in Mexico, it was depicted in such way because it was syncretized with local monsters from Mexican folklore such as the devilish bat of Cerro del Murciélago, Zinacantepec, State of Mexico. According to old legends, this gigantic creature was also able to kill large mammals. In ancient Mesoamerica, people worshipped a Bat God that the Maya called Camazotz, and the Aztecs called Tzinacan. This Deity was venerated in the pyramid and in the caves of Cerro del Murciégalo. ("Cerro del Murciélago" literally means "Bat Mountain" in Spanish. "Zinacantepec," the name of the closest town, comes from the Nahuatl word "Tzinacantepetl." This word also means "Bat Mountain.")

When the Catholic Spanish invaders arrived in what is now Central Mexico, they claimed that the Bat God was an angel that worked for the Devil. In this way, they would end His cult and convert their new exploited subjects to Catholicism. In the "Book of Baruch," it is claimed that all non-Abrahamic Deities are angels that work for the Devil. St. Paul the Apostle firmly believed in this and hence popularized this view among Christians by writing it in his "First Epistle to the Corinthians." I already knew the tale of Cerro del Murciélago, so I thought the chupacabras was, in fact, none other than the devilish bat.

Plenty of people thought that the chupacabras truly existed. Farmers living in rural communities reacted to the chupacabras rumor by killing large numbers of bats in caves all over Mexico. The chupacabras's story was an attempt of President Ernesto Zedillo to misdirect people from the ominous economic and social problems that happened during his reign.

Schoolteacher Lupis Villagrán, the daughter of Daniel Villagrán, organized an elementary school graduation party for us. Toño Barrera, Jorge López, Emy Zazil, and I went with her to Reino Aventura, the amusement park in Bosque de Tlalpan that now is known as Six Flags México. It seems to me that there was an established tradition that



Desmodus rotundus **(Geoffroy Saint-Hilaire, 1810) (Chiroptera: Phyllostomidae)**

Illustration made by Javier Montesinos Medrano. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 857.**

involved celebrating graduation parties there. I presume this because Lily did the same for my kindergarten graduation. On the day of my elementary school graduation party, Lupis decided that we should ride a roller coaster. This roller coaster was known as La Catarina Voladora. Its current name is Tsunami. Riding the roller coaster was a stupid idea. It was a horribly stressful experience. Both my soul and my body felt so wretched. If I would have known how nasty it was to ride such a machine, I would have objected. During all the ride, I did not stop praying the Lord's Prayer, the orison that Jesus uses to pray to God YHWH (Allah) in the gospels of the biblical "New Testament." After this unpleasant experience, we went to another attraction—a ride called Splash. Its current name is Aquaman Splashdown. It entails getting totally wet when the cart that people ride goes into the water (H_2O) and the water that it displaces soaks the people. Before riding Splash, Jorge López and I went to the bridge to see how the cart swiftly went into the water. I was so afraid of the large amount of water displaced by the cart that I hugged Jorge López. The only effect of this was that we ended up soaked. Riding Splash was not a bad experience in the end.

The elementary school curriculum sanctioned by the government of Mexico in the 1990s comprised learning loads of Spanish grammar. The amount of Spanish knowledge that was taught to me was so exhaustive that I do not know anything of what was taught to me. It was simply too much knowledge. Thus, I became a writer in English. We also learned extremely basic arithmetic in elementary school. There were a few classes about nature where we were taught stuff about the countryside, the sea, and the sky. The curriculum was extremely rich in Mexican history trivia. This was the most essential part of elementary school education and was so prominent that during elementary school, I once dressed up as Catholic priest Miguel Hidalgo. Another time, I dressed up as dictator Porfirio Díaz, and the third time as President Carlos Salinas de Gortari. As part of my elementary school education, I also read the following books: "Los de Abajo" by Mariano Azuela (second edition, 1916) and "Het Achterhuis: dagboekbrieven van 14 Juni 1942 – 1 Augustus 1944" by Anne Frank (1947).

I graduated from elementary school on Wednesday, the 10th of July 1996. The elementary school certificate was issued by the Secretaría de Educación Pública (SEP), the government's federal executive department in charge of education in Mexico. Escuela Félix Villagrán Escandón does not exist anymore. Nowadays, this place is Alicia Villagrán's dental clinic and Lupis Villagrán's fashion boutique. Alicia and Lupis are daughters of Daniel Villagrán.

That summer, I went on holiday to Catemaco, Veracruz. There, I went to the

isle that is inhabited by macaques (*Macaca arctoides*). I also visited the tropical rainforest that was found between Sontecomapan and Montepío. In the rainforest, I saw a white hawk (*Pseudastur albicollis*). On those holidays, I also visited the Olmec archeological sites. In a park known as Reserva Ecológica Nanciyaga, a priest of an African diaspora religion performed a cleansing ritual for my family. The way he performed the ritual was by touching my relatives with the leaves of a tree known as *Trichilia havanensis*. At the same time, he censed them with the smoke produced by burning the resin of another tree known as *Protium copal*.

This ritual cleansing is known as limpia. It is an ancient African exorcism that is practiced all over the New World by believers of African diaspora religions. A cleansing ritual using leaves is still practiced by witch doctors and initiates of Poro secret societies in Sierra Leone as well. It is supposed that this exorcism inhibits the magic spells of demons and evil people, attracting health and good luck. I did not participate in the cleansing ceremony because it looked scary. At that time, I thought it was a form of Devil worship, such as playing with a Ouija board. I was of course heavily influenced by the ideas of my sixth-grade classmates when I thought this. Catholics do not think that the limpia is a form of Devil worship. The reason behind this is that some priestesses of an African diaspora religion performed the limpia cleansing on Pope St. John Paul II in the Basilica of Our Lady of Guadalupe on Thursday the 1st of August 2002.

I moved to the house in the backyard. I went to live in Casa de los Albañiles, the house that my grandmother Lorenza commissioned in her backyard and that was inhabited by my parents. It was easy for me to get used to sleeping in my new bedroom, as I used to sleep hugging Camilo, my favorite toy. Furthermore, the bedroom was spacious and had an en suite bathroom.

The son of the owner of the karate sports federation did not teach any karate classes. This was consistent with his aim in life that involved obtaining the largest amount of profit with minimal effort. As a result of this, he always hired instructors that taught the students while he charged the fees. I am in fact happy that the son of the owner was never my instructor, as he was a bad karateka. Toñito and Sebastián, the two instructors that worked in the dojo, suffered a lot of mistreatment from their boss. The son of the owner felt powerful every time he humiliated them and rebuked them. They were hardworking and highly proficient instructors. Nevertheless, the son of the owner still made their life miserable because he felt great while doing so. To maximize profits, he paid them a remarkably low amount of money, even if they taught all the classes, and the student fees were quite high.

Enríquez was already a married man. He left his parents' house and moved with his wife Leslie and his daughter Daniela. He opened a new karate dojo in Pedregal de Santo Domingo, Coyoacán (19.335000301018376, -99.15989321507953). His new dojo belonged to the same sports federation, so he needed to pay a fee to the family of the owner for the franchise. When Enríquez got married and opened his new dojo, Toñito and Sebastián found a better job as instructors in Ossakka Karate Do, a sports federation that was not controlled by the family that owned the one I attended. Enríquez's father-in-law substituted them with two female instructors. Many students in the dojo of the son of the owner were machos that normalized sex-based discrimination against women. Hence, they followed Enríquez to his new dojo to avoid having female teachers. The son of the owner was outraged with Enríquez because according to him, he stole his students, and as a punitive measure, he stopped all financial aid. Enríquez learned to be lazy in the dojo of the son of the owner and no longer worked as an instructor. He appointed one of his students, Daniel Colorado, as teacher.

The principal investigator in the lab where Enríquez worked on his bachelor's degree thesis was Ana Auró de Ocampo. She worked with aquaria and fish tanks. Thus, Enríquez became a hobby aquarist. He embellished his dojo with an aquarium that was inhabited by shrimps that belonged to the species *Palaemon paludosus*.

Daniel Villagrán's school was only for kindergarten and elementary. Therefore, I needed to move to a different school to study middle school. One day, my aunt Luisa spent time with a friend of hers, Diana Milburga. She was her classmate when both studied to become schoolteachers. Diana Milburga recommended a school that, according to her, would be good for me. Her daughters studied there, and she liked it because the schoolteachers were not too strict with them. They had a lot of free time. I was enrolled in that school, the worst of all that I have ever attended.

In old times, there was a stream known as Río Puerta Grande where the school is now found. The source of this stream is found in the mountains of San Bartolo Ameyalco. It then flowed through ravines known as Barranca de Tarango and Barranca del Muerto. From there, it passed through swamps and marshes until reaching Lake Texcoco. In Aztec times, not far from where I studied middle school, stood a bridge where a main road crossed the stream. The road was the one that connected the Aztec capital city with Tenanitla. The name of this avenue is now Avenida Universidad. When I attended the school, the stream did not exist anymore, and there were no wetlands.

The school was in the middle of the city in Colonia del Valle. This was a Freinet pedagogy school such as the school that I attended for first grade. As Freinet pedagogy was applied, it was a school where communist political ideology was imparted. Unlike the school where I studied first grade, this school was not directly founded by exiles of the Spanish Civil War. It was founded later. Nevertheless, it was still the best option for the alumni of the school where I studied first grade, so I reunited again with several of my former classmates from first grade. Even if this school was not created by exiles of the Spanish Civil War, the principal was taught how to teach with these methods in a school that was founded by an exile of the Spanish Civil War in the State of Veracruz.

The ceremony to honor the Mexican flag and the Mexican motherland on Mondays was different to the ones in my previous schools. In this case, the flag was enormous, it was carried folded, and it was flown from a monumental flagpole. This school was radically different to Escuela Félix Villagrán Escandón. The students were not required to wear uniforms. The number of students was immense, also. My new classroom, the smallest one in seventh grade, had an attendance of 24. The central physical place in this school and the most important one was the soccer/football pitch made of concrete. All the buildings were around the soccer/football pitch.

My first school day was Monday the 26th of August 1996. Close to the classroom's entrance door, Yamir and Emilio used to sit. They were my classmates. They spent all their time laughing and joking. I became a very good friend of Yamir. We both were fans of the Super Mario games franchise, and it was the basis of our friendship. Yamir also loved a television show titled "Xena: Warrior Princess." I did not find it appealing.

That year, I also got on well with Octavio Calvillo. He used to sit in front of the desk where schoolteachers sat. Octavio Calvillo's mother used to cuddle, kiss, and caress her son as if he were her boyfriend and not her son. I frequently went to his apartment that was in an avenue known as Avenida Amores. I did not like the food that we ate at Octavio's apartment, because it had too much cream added to it. Cream is made from milk that comes from cows (*Bos taurus*) mixed with locust bean (*Ceratonia siliqua*) gum, guar (*Cyamopsis tetragonoloba*) gum, and sodium carboxymethyl cellulose that is synthesized in labs from cotton (*Gossypium hirsutum*).

I greatly enjoyed the classes of Ramón Vargas, the schoolteacher for introduction to physics and chemistry. He was very wise, and his classes immediately motivated me to study science. Ramón Vargas spoke about the Universe from the viewpoint of astrophysics. His knowledge of quantum mechanics and particle physics was totally

different to what I thought I knew about the Universe before meeting him. His knowledge was by far more advanced and complex. Soon I began to see what Ramón Vargas saw in science, a path toward truth. In his classes, Ramón Vargas delivered long speeches that unified science, technology, and history. His words truly left me speechless. Ramón was also a fan of sci-fi movies. He mentioned them constantly during his classes. As a result, since then, I became a fan of this film genre. Thus, I started to go to the cinema theater Cinemark CNA to watch them, now known as Cineteca Nacional de las Artes.

My other schoolteachers were bad. They did not like teaching children and, therefore, did not put any effort into lessons. There was only one other good schoolteacher—his name was Salvador Sánchez. He was the leader of a science workshop on Saturdays. I started to go there, and I learned a lot from him. What was most surprising about him was that he taught science as a hands-on activity. We obtained all the scientific knowledge from the devices that we built. Hence, that workshop was characterized by working while the students chatted to each other rather than sitting and listening to Salvador. That was an enjoyable experience of social interaction mixed with learning. The school administrators, such as Mr. Molina, Mr. Robles, and Adriana, were the worst schoolteachers, because they liked to psychologically abuse people. Sometimes they did this even if there was no excuse for doing so. They seemed to enjoy the suffering of kids...

As I said before, the school that I was attending was a communist school. They taught us a lot of political ideology. They claimed that the United States of America was the oppressor and the enemy of Mexico. Therefore, that the government of Mexico should always go against American foreign policy and do as much as possible to harm that country. They also taught us that the political party known as Partido de la Revolución Democrática (PRD) was infallible. They told us that we should always vote for PRD in all elections as soon as we were of age to vote, as it was a left-wing party.

They also taught us that the government of the political party known as Partido Revolucionario Institucional (PRI)—that until that time had remained 67 years in power—was the cause of all the ills that happened in the country. They claimed the solution was that a candidate of PRD would be sworn in as president. This president would establish a communist government that would change the economic and political systems of Mexico. They also praised a lot the former government of the defunct Union of Soviet Socialist Republics. They told us that a similar government should be established in Mexico, and that a planned economy should be developed so the forces of supply and demand would not

affect the welfare of the citizens. They also told us that in an ideal and utopian society every citizen should take recreational drugs, even the ones that were illegal at that time. I was not interested in the political ideology that was imparted in the school. Neither did I understand it. However, now that I do understand political matters, it seems to me that all the ideas they taught were absurd and I am against all of them.

Something quite strange happened at that time. In the plant market known as Mercado de Plantas y Flores de Cuemanco, Xochimilco, I bought a plant (*Echinopsis oxygona*). When this plant was being transplanted, we noticed that there was a snake (*Indotyphlops braminus*) with extremely tiny eyes living underground in the substrate of the plastic planter where the plant was originally contained. We freed the snake in our backyard. The snake dug into the soil and went underground.

The biggest problem at that time for me and my classmates was the behavior of two persons: Crevenna and Iván. They were evil people. Crevenna was our classmate. He used to mock and bully us. Furthermore, he was a thief that spent every day stealing objects and money from all his classmates. Crevenna stole many of my ballpoint pens. He used to steal from us when he realized that we were distracted and did not notice him. He liked interrupting schoolteachers during classes to bully them. He bullied them by shouting comments that according to him were hilarious, so that all the students would laugh. Many times, the comments made by Crevenna were not funny, they were simply abusive remarks against the schoolteacher or any of his classmates.

Sometimes he made sarcastic or ironic comments about the topics of the lessons that the schoolteachers were delivering so the schoolteachers would feel bad. Very frequently, he also told jokes in the middle of classes that were not funny, so it was annoying to listen to him. He loved filling male latex condoms with water to throw them at his classmates while they were distracted. In this way, he was able to surprise them by soaking them to laugh out loud at them. Crevenna was teratological because he had a deformity in his fingers and a bifurcated uvula in his soft palate. He claimed that he was a descendant of the House of Crevenna from Biassono, Italy, an aristocratic family. I do believe he was right. The incestuous consanguinity of noble families would be a good hypothesis for his physical deformities. Crevenna liked telling Iván that they were like twin brothers.

Our other classmate that was a bully was Iván. He behaved as if he was mentally ill. Frequently, he used to throw objects at the schoolteachers while they were teaching a lesson to injure them. He used to sing a lot that his mother was a prostitute that had sex with plenty of different men. One day in our biology laboratory class, Iván ate part of

a dead raw octopus (*Octopus vulgaris*) that Madame Rodón was going to dissect. On another day, Madame Rodón vivisected a rat (*Rattus norvegicus*) that was under general anesthesia so we could see the heart beating and we could also see the locations of the viscera. A girl whose name was Martha fainted because of looking at the vivisection. As Iván believed in animal rights and animal liberation, he started to destroy all the glassware and all the containers with reagents in the lab to punish Madame Rodón for vivisecting a rat.

Iván and his friend Gilberto Alemán liked to fart during classes. They thought flatulence was funny but no one else agreed. Iván also enjoyed removing snot from his nose with his fingers in class so everyone would see him doing that. One day Iván collected fresh bitumen from the roof of Covacha de Martín, Martín's small office (Martín was one of our physical education teachers). Iván smeared the bitumen in the chair where Yamir used to sit in class, so his trousers would get dirty with bitumen as soon as he sat there. To threaten us, Iván always used a switchblade knife, as he was allowed to have one with him in school. One day, Iván punched a kid with his fists. The boy that was beaten was Emilio, the pal of Yamir.

Another day, Iván found a broomstick that is commonly used to sweep. He used the broomstick to hit with it whatever student he found, so the children needed to run away from him quite quickly. Otherwise, he would hit them. Sometimes, Iván stood in front of any students even if he did not know them. Then he did not allow them to reach their classrooms. At the same time, he threatened them and abused them by taunting them and saying imprecations. Iván also loved vandalism, such as filling padlock keyholes with Liquid Paper correction fluid, so such padlocks could not be opened with a key when the correction fluid would become solid. Iván also liked to steal all the toilet paper from the toilets, so students would not be able to clean their anuses after defecating. Iván claimed that he was a descendant of Chucho el Roto, a notorious 19th-century bandito. In that way he justified his misdeeds. Mr. Molina, the middle school coordinator, rewarded Iván by giving popsicles to him. He did not give candies or food to any other student. Mr. Molina suggested Iván read novels about pirates, so he could become more violent and criminal than he already was. As a result of this, Iván stated that when he would become an adult, he would like to engage in stealing cargo and money from merchant ships and fishing vessels with the aid of a crew of thugs.

Guatemala is a country that, for almost a whole century, suffered from armed conflicts, corruption, and sometimes autocratic governments. This was initially due to local struggles for power and later the involvement of the United States of America and the Union of Soviet Socialist

Republics during the Cold War. Even after the Cold War finished, the authoritarian attitudes of the government kept people angry and fighting. In the 1990s, there were several villages in the mountains that were against the government. There were plenty of guerrilla fighters there. On Sunday the 29th of December 1996, the government of Guatemala signed peace treaties with the guerrilla fighters. Even if the war finished, ubiquitous poverty and oppression of the poor continued in Guatemala.

One weekend, I went with my parents to Angangueo, Michoacán to visit the Monarch Butterfly Biosphere Reserve. All the *Abies* forest is full of wild monarch butterflies (*Danaus plexippus*). The amount of these insects is so large that the *Abies religiosa* trees that are green end up looking orange because there are large numbers of orange lepidopterans over them. These lepidopterans are migratory, so they do not spend the whole year in the forest.

Thanks to the books that my uncle Jorge Reyes Mejía bought for me, and to my Sunday visits to the museum known as Museo de Historia Natural de la Ciudad de México before my father fell in love with Nora, I had a vast knowledge on biodiversity (please look at Appendix C for a description of the natural history museum). Due to my knowledge, I was the best student in biology class. I already knew everything that was expected that I would need to learn. In some topics, I even knew more than Madame Rodón, our schoolteacher, who was a nutritionist and not a biologist. Each time she asked something to check we were learning, I always answered what was asked, and my answer was always right. In that way, I became Madame Rodón's favorite student.

I was the teacher's pet. Iván disliked me for that, and always said, "Shut that kid up now!" As time went on, every time I answered Madame Rodón's questions, he would say, "Kill that kid now!" Iván clearly developed hatred against me. As a result, one day Iván placed a rubbish bin above my head, so all garbage would fall over me. Another time, he dropped my trousers when he was behind me, and I was in front of all my classmates. He did this to humiliate me in front of all of them. Also, one day Iván requested in public that I would have anal sex with him. He did that to falsely accuse me of being homosexual, so all my classmates would mock me, as all of them were homophobes.

During Easter holidays, when the mystery of the death and resurrection of Jesus is celebrated, I went to Yucatán and the Riviera Maya. The Easter holidays lasted two whole weeks. They comprised all the Holy Week and the following week. In the archeological site of Uxmal, Yucatán, I saw a highly eye-catching bird that people call a painted bunting (*Passerina ciris*). During the Chichen Itza light and sound show, I saw in the night sky the Comet Hale-Bopp

(C/1995 O1). I did not require any special equipment to see it, as it was quite close to Earth. This comet was beautiful; it had a tail that looked like a luminous white cloud. In the United States of America, a Christian denomination known as Heaven's Gate performed a mass suicide because the comet approached Earth. In Ría Lagartos, Yucatán, we saw crocodiles (*Crocodylus moreletii*) and a strange arthropod known as *Limulus polyphemus*. It is said that this arthropod is a "living fossil" because it has a very ancient morphology, and almost all the species of its group are extinct.

At that time, there was no wind farm in Ría Lagartos. As the area was not yet a private land owned by an electric power corporation, fishermen were allowed to go by boat all the way from Río Lagartos to El Cuyo, Yucatán. During most of the boat trip, the water was very shallow, so the skippers were not able to use the outboard motor and moved the boat using a large stick as an oar as in a Xochimilco trajinera or as in a Venetian gondola. In this shallow water part that cannot be currently visited by tourists, there were the largest numbers of American flamingos (*Phoenicopterus ruber*) that I have ever seen in all my life. As they were so abundant, it was easy to study their social behavior. In Las Coloradas, Yucatán, there are some lagoons that belong to the Industria Salinera de Yucatán. The water of these lagoons looks pink due to the pigments produced by the halophilic microorganisms that inhabit them. My parents did not know why the lagoons had such color, but I did, and I told them why.

My father never wanted to snorkel, as he thought such activity was scary. However, one day Nora asked him to snorkel with her, so my father tried snorkeling to please her. As he realized that snorkeling was nice, he told my mother and me that we should try it. We first snorkeled in the underground rivers of Xcaret, Quintana Roo. A few days later we snorkeled in a very shallow *Acropora* coral reef in Contoy Island, Quintana Roo. As this reef was almost at the sea surface, the symbiotic dinoflagellates of the corals that lived there were able to use almost all the solar light wavelengths to undergo photosynthesis. Therefore, there was more variation of photopigments in the species that lived there than in deeper waters. Hence, it is the most colorful and multicolored coral reef that I have ever seen in all my life.

My mother had an accident as she was snorkeling in the sea. She touched a venomous hydrocoral known as *Millepora complanata*. She felt as if she was burnt, and she had a scar in the part of her skin that touched the fire hydrocoral. This scar lasted for 15 years. In the coral reef, I saw spectacular fishes such as *Abudefduf saxatilis*, *Pomacanthus arcuatus*, *Holacanthus ciliaris*, *Anisotremus virginicus*, *Haemulon flavolineatum*, *Scarus vetula*, *Thalassoma bifasciatum*, *Acanthurus*

coeruleus, and *Acanthurus bahianus*. I also traveled by boat to the open sea beyond Contoy Island, where I saw an oceanic manta ray (*Mobula birostris*) in the sea. Said oceanic manta ray was larger than the boat where my parents and I were navigating! My mother feared that the manta ray would capsize the boat, but the gigantic creature ignored us. At that time, there was still a large area covered by pristine tropical rainforests in the Riviera Maya, Quintana Roo. The rainforests were full of monkeys (*Ateles geoffroyi* & *Alouatta pigra*) and great curassows (*Crax rubra*). In such good old days, Tulum, Quintana Roo was not a polluted, dirty city as it is nowadays. It was only a Maya archeological site by the sea that was surrounded by a tropical rainforest. Almost no tourists visited the archeological site and the beaches that were composed of exceedingly white sand ($CaCO_3$) were not yet covered by dead, rotting seaweed (*Sargassum natans* & *Sargassum fluitans*).

I went to visit the entrance of an underwater cave known as Dos Ojos. A man who was at the entrance saw that I was interested in a seashell that he was selling along with other products. The man was a poor Indigenous Yucatec Maya. Even if he was poor, he gave me the seashell as a gift without charging any money. It was a valve of a bivalve known as *Laciolina laevigata*.

Something that I loved about the Riviera Maya was that girls and women spent most of the time half-naked. Thus, they looked beautiful. On the beaches, all of them wore only bikinis, so they were showing off their bellies and their legs. Most of them only wore extremely short shorts over their bikinis after leaving the beach. That allowed them to keep showing off their hot bodies in town streets or outside of the towns, such as in the tropical rainforest or in archeological sites.

Martín and El Chamolo, the two physical education teachers at the school that I attended, organized soccer/football teams whose members were their pupils. Such teams played games against each other. The day that quarterfinals and the final match were played, classes were suspended so we could watch the soccer/football matches. This was a tradition that happened every year. I really do not know why soccer/football was so important, as no one from that school ended up working as a professional or as a semi-pro soccer/football player. I do not like soccer/football. To know why, please see Appendix A.

One day, Iván told me to follow him to a classroom on the floor above the ground floor of the school. He then opened a window. Behind this window, there were two water tanks. Iván then said, "I command you to go through the window!" I was hesitant to do that. There was no door to access the water tanks, only the window. As there was not a door to get there, I thought it was banned to access the water tanks. It was indeed banned. Nevertheless, I

went through the window because I feared Iván's likely reprisals if I would not do what he ordered me to do. Iván also went through the window. Iván then showed me something strange. In the wall and hidden behind the water tanks, there was a narrow secret passage that could only be accessed by entering on all fours. Iván said, "Have you noticed something regarding this school's name? The name of this school sounds ancient! In this school, there is an ancient treasure, and it is inside this secret passage..." While Iván was distracted speaking, I swiftly jumped through the window back to the classroom. I then ran away as fast as I could.

Inside the secret passage entrance, there was a tunnel. The path was then split into two passages, one to the right and one to the front. The passage to the right was a narrow tunnel that had some tiny windows on its left-hand side. These tiny windows were above the eastern bookshelf in the large library above the principal's office. When one was in the library, behind these windows one was just able to perceive darkness, as there was almost no light inside the secret passage. If one would follow the secret passage ahead of the entrance instead of following the one at the right, one would end up reaching a space with sunlight below the metallic stairway that provided access to the two uppermost classrooms of the school. In the space below the metallic stairway, there was another tunnel to the right leading to a vertical ladder that, if followed downwards, reached the level where the principal's office was found. The exit was there; it was a metal door in the principal's office that was in front of Headmaster Sergio's desk. Mr. Robles, the student discipline coordinator, said that some students who tried to explore the secret passage were unable to exit it by themselves. He helped them to get out of there, but they were immediately expelled from the school.

As Iván hated me, he threatened to murder me if I would not walk inside the secret passage that was found behind the water tanks. He wanted me to explore the secret passage to find the treasure that, according to him, a pirate hid in such a place. Iván wanted me to hand the treasure to him. At that time, I thought that what Iván truly wanted was for me to go quite deep inside the secret passage so he then could denounce me to Mr. Robles. In that way, he would ensure that I would be dismissed from the school. In that way, Iván would get rid of me.

At some point, Iván was so jealous that he said to me that he was my archenemy. He then issued a death threat against me regardless of what I would do or what I would not do. When my mother went to the school office to complain about Iván's behavior, Mr. Molina asked her to please refrain from telling the parents of the other students about Iván's misdeeds. Mr. Molina of course knew that Iván did not just bully

me. He knew he bullied the others as well. The only difference was that Iván was more jealous of me. Even if my mother did not talk to other parents regarding Iván's behavior, plenty of other parents complained about that boy. They knew about him due to their children's testimonies. On the last school day, Iván told Yamir and me that sooner or later, he would be able to find us to kill us.

On Saturday the 30th of August 1997, the former wife of the heir to the throne of the United Kingdom died in a car crash. Her name was Princess Diana. In previous years, she became a living legend. Plenty of conspiracy theories were suggested to explain her death as a murder.

In eighth grade, Iván and Crevenna did not return to the school. They were expelled because the students and their parents complained a lot about them. The reason was that Iván and Crevenna behaved badly toward all the students. Iván was loved by the school administrators. He was so loved that many years after he left, Mr. Robles, the student discipline coordinator, still had Iván's portrait photograph hung in front of his desk in his office. When I started eighth grade, I thought it would be one of my happiest years, as Iván and Crevenna would not be bullying me anymore.

At that time, Emilio, the boy who was Yamir's pal, sat in front of me in the classroom. Close to me, another boy named Andreas sat as well, and so did a gal that was named Lara. I quickly became a very good friend of all of them. We used to talk and laugh a lot. Indeed, as I suspected, the eighth grade was a happy time. However, that was not just because Iván and Crevenna were not attending the school anymore. It was also thanks to my friends Andreas, Emilio, and Lara. I can remember that Andreas enjoyed drawing superheroes during classes. These heroes were original characters that he made up in his mind. Emilio and I soon started drawing original characters that were superheroes that we imagined as well. It was so funny imagining superheroes and then talking about their stories with my friends!

Yamir was the best friend of Emilio while they were studying elementary school in Colegio Téifaros, their former school. That stopped when they started studying middle school. During middle school, Emilio started to spend more time with Jetro, another one of his classmates. Jetro loved listening to rock music (e.g., "Bad Religion – Punk Rock Song" (1996)). Jetro always wore black clothes. He also painted his fingernails with black nail polish and his eyelids with black eyeshadow. He did this to imitate the looks of the members of some famous rock bands. Therefore, Emilio also started to dress in black. Moreover, he also started to listen to the music of Marilyn Manson (e.g., "The Beautiful People (Official Video)" (1996)). Yamir started to feel jealous of Jetro, who according to Yamir

stole his best friend. To please Emilio and to outcompete Jetro in their rivalry to attain their common friend as their bestie, Yamir decided to become a goth. Yamir requested many times that I should also become a goth. According to him, it was the best way to become popular in school. I did not think popularity was important, so I never dressed up as a goth. Yamir also started to spend a lot of time with Anabel Quirarte, who introduced him to the goth subculture. She was studying in another classroom.

Punk rock was developed in the 1970s in the United Kingdom. One of the first bands of this genre was the Sex Pistols (e.g., "Sex Pistols - God Save The Queen" (1977)). The goth subculture developed within the punk scene with bands such as Siouxsie and the Banshees (e.g., "Siouxsie and The Banshees - Spellbound (Official Music Video)" (1981)). Being a goth means always dressing in black and listening to goth music (e.g., "Stolzes Herz" by Lacrimosa (1997)). Goths also love horror, and all fine art related to death, darkness, and vampires. Goth people used to meet in groups on Saturdays and Sundays in a park known as Jardín Centenario, in Downtown Coyoacán. There, all of them wore black outfits. They also wore makeup on their faces to look like clowns, or to imitate vampire characters from young adult fiction books.

Vampires in fiction are undead people with great necromancy powers who are refined, wear stylish outfits, and drink blood of normal people. In their folkloric origins in Eastern European legends, they are living corpses that are alive thanks to necromancy and that are buried inside tombs in graveyards. In folk legends, it is said that the normal people whose blood is sucked by vampires during nights and early mornings become ill and frequently die. As farmers fear them, they always try to exhume their corpses. The farmers perform rituals when these corpses are finally removed from their tombs to keep the vampires from harming normal people. For Eastern European farmers, vampires were not fictitious characters. For them, they were real people and a hazard to society. Pre-Linnaean botanist Joseph Pitton de Tournefort (1717) wrote a memoir titled "Relation d'un Voyage du Levant, Fait par Ordre du Roy." In this book, he describes how he witnessed the exhumation of a vampire in Mykonos, Greece. After several rituals, the vampire was destroyed on Saturday, the 1st of January in 1701. Archeologists have found plenty of burials all over Eastern Europe that show that people performed rituals to inactivate vampires that presumably were such corpses. In some myths, vampires behave as patients infected with rabies (*Rabies lyssavirus*). This is according to Heick (1992) in his paper "Prince Dracula, Rabies, and the Vampire Legend," published in "Annals of Internal Medicine" 117(2): 172–173. One of the benefits of the goth subculture was that the youth were able to dress up and imagine

that they were vampires. This was a bit like in live-action role-playing games (LARP). However, in the case of goths, that was a full-time activity while they were in the streets, in school, and fulfilling their everyday tasks. Goths, of course, were not dangerous as the real vampires from Eastern European legends.

Gilberto Alemán and his namesake Gilberto Villeda spent all the time in class talking about the television anime show "Dragon Ball Z." They did not do any homework anymore. Neither did they write any essays nor work on school tasks. The reason was that they started to copy all my work. I freely gave it to them before handing it to the schoolteachers for marking. I used to do that because they said that they needed my help, and I decided to help them. My classmates Melina Hernández, Karla Berrospe, and Jessica Ortiz were angry because of this. Hence, they talked by telephone with my mother to tell her that Alemán and Villeda were taking advantage of me.

Jurisprudence

Lupis Villagrán was an irresponsible woman. She made us ride the Reino Aventura attractions without any informed consent. We should have been given information regarding how nasty they were so we could then choose if we wanted to experience that or not. According to Enríquez, before his downfall, the first duty of a teacher is to take care of the students. Taking care of them does not just mean protecting them from possible misfortunes in the future through education. It also means protecting them from current threats as well. Lupis Villagrán's moral duty was to warn us of how unpleasant the rides were. Instead, she did not do that and only made us feel afraid and miserable.

My parents acted righteously by allowing me to choose not to be ritually cleansed by the priest of the African diaspora religion in Reserva Ecológica Nanciyaga. According to Enríquez before his downfall, we are all responsible for making rational decisions related to our spiritual development. Thus, it is important to choose the rituals that we want to perform and to avoid the ones that we do not want to perform.

Enríquez the Lawgiver acted wrongly by delegating Daniel Colorado with the task of teaching his pupils. He did this to copy the strategy of his father-in-law, who commissioned Toñito and Sebastián to teach his students. A fair teacher ought to be like a father. If Enríquez was responsible to his students, his spiritual children, then he should have been a dutiful spiritual father and mentored them personally. This would of course have happened if he would have behaved according to his old doctrine.

Octavio Calvillo's mother acted wrongly by providing her son with such a high-calorie diet. According to Enríquez before his downfall, one ought to keep a body that is athletic and healthy in all respects. That would be the only way to achieve the personal growth that he aimed for.

Ramón Vargas and Salvador Sánchez were marvelous and excellent schoolteachers according to Enríquez's teachings before his downfall. The reason was that they were able to transform their students into better people. Ramón was able to do this with his edifying speeches and his physics equations. Salvador was able to do this by motivating creativity and the manual skills of the youth.

Iván and Crevenna acted as criminals because that is what the school administrators allowed them to do. If the school administrators had wanted to stop them, then they would have dismissed them from the school earlier. Hence, Headmaster Sergio, Mr. Molina, and Mr. Robles acted wrongly according to Enríquez's doctrine. The reason why they acted wrongly was that they allowed their students to be threatened by such a dangerous boy as Iván was. Furthermore, they also allowed their students to be psychologically damaged by the way they were humiliated by Crevenna.

Iván acted in an immoral way by blaming his genes for his bad behavior. He did this when he excused his own misdeeds because, according to him, he was a descendant of Chucho el Roto. According to Enríquez's teachings before his downfall, our entire life must be a struggle to improve ourselves each day. Thus, if we have a genetic predisposition to perform evil actions, we need to struggle each day to surpass these biological urges that make us want to harm others. Iván obviously knew that he was misbehaving. Otherwise, he would not have appealed to the genes that he inherited from his ancestor to justify his transgressions.

Andreas acted righteously, however. He acted correctly by drawing superheroes. By doing so, he was developing his creativity and helping Emilio and me to develop our creativity. Therefore, he was encouraging our personal development, one of the most important aims in Enríquez's doctrine.

Joseph Pitton de Tournefort did well to include in his memoir the narrative on the vampire exhumation. This was right according to the teachings of Enríquez before his downfall. The reason is that in this way, Tournefort warned us of the spiritual hazards that stalk us while they are hidden in the darkness, waiting to bleed us dry. Tournefort did not believe in them, but by telling us the whole story, we can still be warned.

I behaved wrongly according to Enríquez's teachings before his downfall by allowing Gilberto Alemán and Gilberto Villeda to copy all my work. To protect my integrity, I

should have forthrightly denied their requests to copy my work.

Melina Hernández, Karla Berrospe, and Jessica Ortiz acted rightly by attempting to protect me from Villeda and Alemán. Before his downfall, Enríquez always preached about fairness and how we ought to protect the weak from the oppressor. They behaved righteously.

CHAPTER 8. *AQUILA CHRYSAETOS*

At the beginning of October 1997, there was a terrible hurricane on the Pacific coast of Mexico. This hurricane that caused great mayhem was known as Hurricane Pauline.

On Saturdays in Salvador's science workshop, I made good friends such as Leonardo Soria, Oziel González, and Daniel Mastretta. It was during eighth grade that I became Salvador's right-hand man. That gave me prestige among my peers. On Saturday the 11th of October 1997, I attended Salvador's science workshop as usual. That day, I met a girl there. Her name was Verónica Jiménez. Her brown hair was shimmering. It was so long that it reached her buttocks. Her smile was winsome. Looking at her lovely smiling face was like looking at the heavenly brightness of a sunset. That is how pleasing to the eye she was. I had never met a girl with such long hair. She was studying seventh grade. We both were 12 years old. The day we met, we spent all the time looking at slide preparations under the microscope. All the other students were working on other tasks. Only Verónica Jiménez and I were all the time looking at the microscope. It was the first time I fell in love.

I felt an indescribable desire to spend time with her. My life became more beautiful just thinking about her. Every Saturday, I went to the science workshop with the only aim of spending time with her. Being in love during autumn is beautiful. The fresh wind of the afternoons and the Sun setting in a clear sky full of colors transform love into a magical experience.

Verónica Jiménez became my fantasy for escapism purposes. In my house, everything was going wrong. My father was turning into an alcoholic. Every week, he spent more time with Nora and her friends than the previous week. Every time my father arrived at my home at night, he was drunk. My father ridiculed himself by trying to pretend that he was young to please Nora. He underwent cosmetic surgery on his eyelids and his nose to please her. He also wasted money to please Nora's friends.

My grandfather Tomás was disabled and sitting in his wheelchair, every day more ill and closer to death. As a result of suffering depression, my mother spent most of the time sleeping. Every time she woke up, she rebuked me by shouting at me in the cruelest possible way. She did this even if I did not do anything wrong. When I fell in love with Verónica Jiménez, I felt a powerful exaltation and bliss that I had never felt before. Madame Rodón told me that I should confess my love to Verónica Jiménez so she could become my girlfriend.

Aquila chrysaetos **(Linnaeus, 1758) (Accipitriformes Accipitridae)**

Illustration made by Radka Bošková. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 858.**

However, I did not do that. I loved her in secret, as I did not know what to do next. I was shy and I feared that she would reject me if I would tell her what I felt for her. That is why I never tried to tell Verónica what I felt for her. That would allow me to keep for myself the emotions and the sensations that were the source of my escapism from all the horrible events in life. My social interaction with Verónica Jiménez in the science workshop was peculiar. As we were 12 years old, we still played as if we were children. Nevertheless, in my mind I loved her as if I were an adult.

Verónica Jiménez liked to spend time with her friend Jazmín. They loved summoning demons in their classroom by playing the game of the pencils. This game was played using six pencils. The six pencils were arranged in the shape of a rectangle. The width of the rectangle measured one pencil. The length of the rectangle measured two pencils. Verónica and Jazmín faced each other while holding a pencil with each hand. The demons Mickey and Cleo supposedly answered to them "yes" or "no" by shifting the pencils inwards or outwards of the rectangle. As a result of this, Adrián Natán claimed that they were witches. He was one of their classmates since they were studying elementary school in Centro Montessori Tonali, their former school.

In my classroom, one of my classmates was a girl named Romina Sales. She wore such short shorts that her longline T-shirts reached lower than her shorts. Hence, she showed off her amazing legs. Sometimes she also wore shirts with all their buttons undone while only wearing a bra under such shirts. Hence, she showed off to all of us her bra, the bare skin of her chest, the bare skin of her belly, and her innie navel. She was a professional artistic roller skater. Hence, she had an attractive body. I truly liked looking at Romina's body. Nevertheless, I was not in love with her. I was in love with Verónica Jiménez. I realized that love involves more feelings than mere physical attraction. The fashion that Romina Sales wore to go to school was part of the beginning of the so-called Y2K (Year 2000) fashion that would become extremely popular in the following years.

My family celebrated my 13th birthday when I became a teenager. Three days later, on Friday the 12th of December 1997, a circumhorizontal arc was sighted in the sky of Mexico City. A circumhorizontal arc is a group of clouds that have rainbow colors. The circumhorizontal arc of December 1997 did not look like the circumhorizontal arcs that can be seen in Google Images, as the 1997 one covered the whole sky, not just a small area of it. The Catholics claimed that it was an apparition of the Virgin St. Mary of Guadalupe.

On Christmas holidays I went to Oaxaca City, Oaxaca. A new highway was recently built. It was a straight highway that could be traveled in a brief time. It runs across the

desert known as Tehuacán-Cuicatlán. As a result of the new highway, Oaxaca City was not as remote from Mexico City as in previous years. Tehuacán-Cuicatlán comprises exceedingly arid valleys and mountains, so it is populated by plants adapted to dry environments. Hence, there is a huge endemic diversity of succulents, my favorite plants at that time! I could not believe the number of wild cacti and other succulents that I saw by the highway between Cuacnopalan and Oaxaca City. I felt euphoric seeing so many plants of the groups that I loved.

I watched a wild golden eagle (*Aquila chrysaetos*) in the State of Oaxaca during the holidays. The golden eagle is quite an average and normal bird. There is nothing special about it. However, humankind has always been very obsessed with this bird. It is peculiar that in almost all cultures and civilizations, it has always been a symbol of strange values and ideas. These values and ideas are strange because usually people want to preserve their own life or human lives in general. However, the values and ideas that are usually symbolized with a golden eagle are such sources of madness that lead people to either be ready to kill other human beings, or to be ready to be killed by other people. Indeed, the golden eagle is the symbol of the fatherland, of the Deities, and of plenty of other political extremisms that make people behave in fanatical and irrational ways.

Even some ideas that, in our minds, are not related or are even opposite to each other have used the golden eagle as a symbol. As an example, on one side, Christianity for us means the most excellent and prosocial values. On the other side, the fascism of Nazi Germany means the most despicable and antisocial vices. Strangely, the golden eagle has been both a Christian symbol and a fascist Nazi symbol. I shall explain why.

In the mythology of ancient Mesopotamian religions, King Etana went to Heaven by riding a golden eagle to talk to the Anunnaki Deities. This is the origin of the Homeric Greek story that tells us how Prince Ganymede was abducted by a golden eagle to become a homosexual lover of God Zeus. As a result of this, the holy animal of God Zeus is the golden eagle, so the Romans used it as a symbol of their empire. The Germans also used that symbol through cultural appropriation because they also thought they were a mighty empire like the Romans. That is why a golden eagle was depicted above the swastikas in Nazi banners. One of the heads of the tetramorph cherubim of the Merkabah in the vision of prophet Ezekiel is a golden eagle's head. This can be read in the biblical "Book of Ezekiel." The Christians got the four cherubim through cultural appropriation and included them in their "Book of Revelation." Since then, the holy animal of St. John the Evangelist is the golden eagle. During my holidays, I also saw a russet-crowned motmot (*Momotus*

mexicanus) and a white-throated magpie-jay (*Cyanocorax formosus*) on the Oaxaca coast. There, I visited Huatulco, Mazunte, Puerto Escondido, and Lagunas de Chacahua.

On Tuesday the 13th of January 1998, something happened in the school that I was attending that I did not witness. The reason is that at that time, I was already on my way home inside my mother's car. Some solid wood beams that are used to build huts were tied up above a bench in the soccer/football pitch. The beams fell above the head of a kid whose name was Rubén Rodríguez. Therefore, he died. The strangest fact about this event was that some of the students who witnessed it claimed that they saw how Samuel's wife untied the beams from the window of the drawing classroom so they would fall over the head of the child. Samuel was a school cleaner who lived in the school with his family. In the official version told by the school administrators, everything was an accident. Nevertheless, this "accident" seemed too fishy. Why were extremely heavy beams tied up above a bench where students used to sit? However, that was not the strangest event surrounding Rubén Rodríguez's death. The strangest event was that the school administrators organized a ritual to honor Rubén Rodríguez that looked like a ceremony of a religious cult. They commanded that all the students should start to clap their hands. We were required to clap our hands at the same time as the other students with no time difference, not even a second before or after the others clapped their hands. At the beginning, the time gap between each clap was long, but it became shorter after each clap. At the end of this procedure all of us ended up clapping our hands quite quickly. It looked as if I was in a weird church instead of in a secular school with communist ideology.

Something even more bizarre was that the stains of Rubén Rodríguez's blood that were on the concrete floor of the soccer/football pitch were protected from fading. These blood stains became repulsive blood clots, but they were preserved by the physical education teachers by covering them with a metal box with wheels that was used to store the balls used by the students to play games. In this way, by covering the blood clots, neither rain nor wind would erase the blood. These stains were of course never swept with a broom. All of this was like a ritual to keep the sacrificial blood on the school floor. Worryingly, even if each class of that school had only about 80 students, a student of each class generation died in an awful way (not all of them died inside the school). From my class (1996–2002), Arturo López Ducolomb died. He was a wise intellectual. From the class of 1997–2003, Rubén Rodríguez died. From the class of 1998–2004, Midori died. She was a girl with a sexy and attractive body. From the class of 1999–2005, Aurora's son

died. Aurora was one of our teachers of English.

During an exam season, I got a throat infection as usual. As it was winter and mornings were cold, my mother decided that I should not attend school during the first hour of the day. Hence, I arrived later. As soon as I arrived, Andreas told me that one hour before, Iván visited the school. Iván enquired where I was. I did not believe Andreas. It was just too coincidental that just when I was not in the school, Iván visited it to meet me. One Sunday, I was in the ground floor room of my house where my grandfather Tomás slept during the evenings.

From the window, I saw Alonso walking down the street. Alonso was Casandra's brother. Casandra was the girl who was my karate classmate in Enríquez's dojo when we were little children. She was my neighbor on the same street where I lived. Casandra and I knew where we lived, and we got on well. Walking down the street, behind Alonso, someone familiar to me was following him. It was Iván. I immediately told my aunt Yolanda that in case Iván asked for me, she should say that I was not at home. I ran away toward the house that I call Casa de los Albañiles that was in the backyard. I locked myself in my bedroom, remembering well what Iván swore. He swore he would kill Yamir and me. Alonso, Casandra's brother, told Iván where to find me. I do not know how they met each other, but they were coming for me! Suddenly, the electronic doorbell rang. It was not a coincidence that Iván walked with Alonso in front of my house; he was looking for me. My aunt Yolanda told him I was not at home, so Iván left. Unfortunately, it seemed Iván was ready to fulfill his promise, and he knew where to find me...

Each year, there was a science and technology fair where the students from different schools displayed their projects. I went with some of my peers to show the projects that we made in Salvador's science workshop. I was awarded by Salvador the title of environmental education ambassador of the school. Thus, I needed to show and explain the sustainable development project. I was able to choose a member from my team so such a student would be my assistant. Of course, I chose Verónica Jiménez, my crush.

The project was a low-cost aquaculture of Nile tilapias (*Oreochromis niloticus*) in reduced urban spaces. The tilapias need a source of proteins. According to Salvador Sánchez, our schoolteacher, to provide them with proteins, they are usually fed with fish flour. This is made from marine fishes such as *Engraulis mordax*, *Cetengraulis mysticetus*, *Etrumeus teres*, *Sardinops sagax*, and *Scomber japonicus*. This flour is bought from companies, and it is expensive. A solution to make it cheaper is breeding the protein source at home. In our project, we fed the tilapias with earthworms (*Eisenia*

fetida) and with fly larvae (*Hermetia illucens*). We bred the earthworms in a wormery and the fly larvae in an organic waste composter. The aquarium consisted of two fish tanks that were linked by a tube, so the fish could move from tank to tank. The fish tanks were made by us with polyethylene terephthalate (PET) plastic from former carboys, so we recycled it.

In that aquarium, there was an aquatic plant (*Echinodorus grisebachii*) that was planted in the substrate. The air pump worked with a solar cell with a battery used to store energy. Verónica Jiménez and I spent all the first day together practicing the speech that we needed to say. After that, we showed the project to all the students from the school that I was attending. They visited the lab in small groups. The next day Verónica and I went together by car with the aquarium inhabited by the living fish, with the wormery inhabited by the living worms, and with the composter inhabited by the living flies, to the Science and Technology Fair. Verónica Jiménez and I spent the whole day giving the same speech to the students from the host school and to the guest science students. Spending all day close to Verónica Jiménez made me feel a complex emotion that was a mixture of euphoric happiness and love. It was like having divinity within me.

I went to Toluca, State of Mexico to visit an attraction, the "Cosmovitral" by Leopoldo Flores (1980) (19.293603141767086, -99.65370813597684). "Cosmovitral" is a series of gigantic, multicolored stained glass art installations that surround visitors. They are extremely spectacular! They are found inside a monumental glasshouse that has traditional ornamental plants, succulents from deserts, and a pond with aquatic plants.

One day, I found a pornographic comic strip in a free magazine full of ads. I had never seen pornography before. The drawing that depicted the young woman and the pornographic narrative made it a highly erotic comic strip. As a result of this, I had my first ejaculation. After this event, I did not see any more pornography until 2006, eight years later. The reason was that I was not very motivated to look at it.

During those years, I frequently holidayed in Yucatán. I loved visiting the tropical deciduous forests and the wetlands to watch birds or any other non-human animal that would be there. My usual route started in Mérida, traveling to the archeological sites in the south of the State of Yucatán. From there, I visited Chichen Itza, then Río Lagartos, and, finally, wrapped up in Cancún visiting the Riviera Maya.

One day I visited the Ría Lagartos in winter and I saw plenty of different species of birds. Afterward I visited it at the end of spring, and I did not see even half the species or individuals that I saw in winter. The reason is that plenty of species are migratory, so

Portrait of Verónica Jiménez, the girl of the autumnal sunsets

Illustration made by Patricia Chu. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 858.**

they spend the summer in the United States of America and Canada, where they breed. However, I did not know that at that time, so I cried bitterly one night in a hotel in Mérida, thinking they had died due to human activities. I started to worry about the mass extinction of biodiversity that was going on all over the world.

Therefore, I started to read about this topic. I learned a lot about that and about all sorts of other environmental sciences. Eventually, because of my studies, I learned that the reason why there were not as many birds was due to their migratory movements. Despite this, the environmental topics were interesting. I was not just concerned about the biodiversity crisis but also about climate change.

During that time, it was fashionable to talk about a sheep (*Ovis aries*) that was cloned by a British scientist named Ian Wilmut. If you want to read about this discovery, please read the paper by Wilmut et al. (1997) that is titled "Viable Offspring Derived from Fetal and Adult Mammalian Cells." It was published in "Nature" 385: 810–813. Inspired, I thought it would be interesting to learn reproductive biology at university to learn how to avoid the extinction of endangered species of mammals through cloning. I thought that maybe with such techniques, one day even birds would be cloned. I believed that molecular biology and its techniques would be able to save planet Earth from its worst environmental issues.

I do not mean resurrecting already extinct species like in the novel by Michael Crichton (1990) titled "Jurassic Park." (In this story, scientists resurrect non-avian dinosaurs such as *Dilophosaurus wetherilli*.) I thought our civilization should clone non-extinct endangered animals so people would live in harmony with them.

At the time I am publishing this book (2025), many endangered mammals have been cloned. Some of these experiments were successful. Others were not as successful as expected. The species cloned were the black-footed ferret (*Mustela nigripes*), the Przewalski's horse (*Equus ferus*), the banteng (*Bos javanicus*), the gaur (*Bos gaurus*), and the Iberian ibex (*Capra pyrenaica*). Hybrids between coyotes (*Canis latrans*) and red wolves (*Canis rufus*) have also been cloned.

On the same holidays when I became environmentally conscious, I took the tour to the Loltún Cave, Yucatán. On that tour, the guide took us to a place that no other guide had before. It was a place inside the cave where the local modern farmers worshipped a small sculpture made by the ancient Maya that lived before the time of the Spanish conquest. Modern people still venerate it, they ask miracles from it, and they pray to it in Yucatec Maya. This cult has survived during many centuries because

the h-men herbalists claim that this sculpture is an aluxe. A h-men herbalist is a peasant physician that does not study at university. Such a person inherits ancient knowledge orally. In folktales, the aluxes are people that are immortal and have supernatural magical powers.

Flying over the sea between Veracruz and Yucatán in rainy season versus dry season is a different experience. During the rainy season, the continent is full of clouds and the sea is less so. During dry season, the sea looks full of clouds, but the continent does not have them. That is something strange that I noticed at that time.

Verónica Jiménez was amazing! She was the light of the autumnal sunsets! She was a happy girl that always was smiling. She liked making funny comments. When she smiled, the dimples in her cheeks were noticeable. As she was cheerful most of the time, it is possible to ascertain that she had the personality type that ancient physician Galen referred to as sanguine in his essay "De Temperamentis." Verónica was eloquent, but not an extrovert when there were plenty of people around her. She was very curious. She was interested in science and learning new things.

Her pet was a dog (*Canis familiaris*) whose name was Boris. She loved listening to the music of Luis Miguel, Chayanne, Savage Garden, Mercurio, and Kabah. She loved dancing individually, but not spectacularly like professional dancers. She simply moved her body following the rhythm of the music during parties. Even if she did not dance in a special way, I thought she looked very lovely when she danced! (To listen to the music that was danced to in the parties of the time, please watch this video: "Kabah - La Calle De Las Sirenas" (1996).) Verónica Jiménez always dressed wearing blue jeans and a T-shirt. She frequently tied a sweater around her waist, using the sleeves of the sweater to tie it following the fashion of that time. Sometimes she painted her eyelids with glitter eyeshadow. She always wore a necklace with a charm that was a seed of *Mucuna sloanei*. This seed had plastic resin attached to it that resembled the head and the legs of an elephant (*Elephas maximus*), so the seed would have the overall shape of an elephant. Verónica Jiménez spent all the time with Jazmín, her best friend, whom she met in kindergarten. Jazmín got angry every time people called her Jasmine. Nevertheless, people frequently called her like that because of the Disney princess from the film "Aladdin" (1992). Jazmín never attended Salvador's science workshop, so I do not know a lot about her.

In the parties for teenagers of that time, the main activity was dancing. Some heterosexual couples practiced French kissing and sexually caressed in public. The parties were always held during the night.

The music was controlled by a disc jockey (DJ) in a digital music player connected to

extremely strident loudspeakers. There were plenty of bulbs of different colors that were turned on and off intermittently. There were also some bulbs that were not fixed; they moved. From time to time, the party organizers produced condensed water vapor (H_2O) by mixing hot water with solid carbon dioxide (CO_2). I do not know in what way such steam was useful for the party.

At that time, my collection of living succulent plants was remarkable. I had plants in both my Mexico City house and in the house of Cuernavaca that was previously inhabited by my grandfather Tomás before he suffered from his illness. My grandmother Lorenza always helped me to take care of the plants in Mexico City. Most plants were bought in the famous Quinta Fernando Schmoll, Cadereyta, Querétaro, as such nursery had the best inventory of succulent plants at that time. An interesting plant that was not purchased in Cadereyta was a vygie (*Mesembryanthemum cordifolium*) that once belonged to Julián Santana, the legendary horticulturalist who made the Isla de las Muñecas attraction in Xochimilco and that, according to a legend, was killed by a mermaid. Another potted plant was a cactus (*Schlumbergera truncata*), a gift that sexy Romina Sales gave to me. Some of the most peculiar genera of succulent plants that I kept at that time were *Haworthia*, *Aloe*, *Gasteria*, *Beaucarnea*, *Yucca*, *Furcraea*, *Agave*, *Guzmania*, *Tillandsia*, *Aechmea*, *Crassula*, *Cotyledon*, *Kalanchoe*, *Sedum*, *Echeveria, Euphorbia*, *Faucaria*, *Brasiliopuntia*, *Opuntia*, *Pereskiopsis*, *Cylindropuntia*, *Astrophytum*, *Echinocactus*, *Ferocactus*, *Thelocactus*, *Coryphantha*, *Mammillaria*, *Aporocactus*, *Selenicereus*, *Epiphyllum*, *Disocactus*, *Echinocereus*, *Stenocereus*, *Lophocereus*, *Rhipsalis*, *Hatiora*, *Rhipsalidopsis*, *Parodia*, *Rebutia*, *Echinopsis*, *Espostoa*, *Stapelia*, &c.

The 1998 FIFA World Cup France, an international soccer/football competition, was an extremely important event in the school that I was attending. The classes were suspended so we could watch the soccer/football matches on the televisions that were found in every classroom. That was a tradition in the school. Apparently, watching soccer/football was more important than education. Unfortunately, they did not give me money back from the fees that I paid as compensation for not teaching me during the time that was wasted watching soccer/football. Soccer/football was the greatest obstacle that impeded one's education at such school.

I went on holiday to Puerto Vallarta, Jalisco. I participated in a tourist attraction that involved placing baby sea turtles (*Lepidochelys olivacea*) at the sea during nighttime. I went to the Marietas Islands, Nayarit, where I watched a colony of boobies (*Sula brewsteri* & *Sula nebouxii*). In a research station known as Estación

Biológica de Chamela, Jalisco, I watched a wild deer (*Odocoileus virginianus*).

My uncle Jorge Reyes Mejía was gravely ill with diabetes. To survive, he needed dialysis. Thus, we went to Tuxpan so he could come live in Mexico City. He and his wife Esperanza (who did not love him) moved to Mexico City, to the house of my grandparents. Even in our house, Esperanza mistreated my uncle a lot. She abused him verbally and humiliated him constantly.

Enríquez's dojo was in Pedregal de Santo Domingo, Coyoacán. It was a rough neighborhood with plenty of criminal gangs. Originally, Enríquez thought that his father-in-law would help him to open a new dojo in a more affluent part of the city, as he was married to his daughter. As his father-in-law was involved in a commercial competition against Enríquez, he did not help him. The criminal gangs of skid row wanted to develop their fighting skills by training, so they frequently challenged Enríquez's students to fight duels against them in the street. Enríquez's students were afraid of the bad guys, so they stopped attending the dojo and the dojo closed. However, Enríquez opened a new dojo in the same building where he was living because the rent fee was less than in the previous place. This new dojo was also in Pedregal de Santo Domingo (19.333884940040754, -99.16133715748377).

Nevertheless, this dojo also closed because of the same problems as the previous one. Enríquez betrayed the idealistic dreams of his youth and married to a young woman that he did not love to obtain more money and success as a karateka, which proved useless. Enríquez then had to work for his wife, a woman that he disliked—and in addition to this, had to live with the responsibilities of a father. This was not his dream of life. Enríquez and Leslie spent all the time shouting while quarreling and verbally abusing each other. He then worked selling veterinary drugs, a career he did not love. Such was the tragedy of Enríquez the Lawgiver, the young man who gave into temptation. I then stopped practicing karate forever and no longer communicated with or met with Enríquez. I saw the lawgiver for the last time in his dojo. Daniel Colorado, Enríquez's disciple, opened his own dojo. Gabriel Escalante, my former karate classmate, worked with him. They did not work for the family of Enríquez's father-in-law. Their sports federation was independent, free, and sovereign. Its name is Ki Sports. Daniel Colorado was able to surpass Enríquez as a martial artist, as he was able to get a bronze (CuSn) medal in kickboxing in 2013 in the World Combat Games in Saint Petersburg, Russia.

In the middle school that I was attending, there was a very bad mathematics teacher whose name was Mr. Guadarrama. He

enjoyed changing the names of the words used in math because he thought that was funny. My mother did not like such jokes, so she asked Headmaster Sergio to please change me to a different group that would not be taught by that schoolteacher. None of my friends were in the new group. Yamir was not there, Emilio was not there, Andreas was not there, and Lara was not there. Therefore, I felt a bit lonely. I could have met them during lunchtime, but that was not the same amazing experience as before. Another bad event that happened during ninth grade was that Verónica Jiménez stopped attending Salvador's science workshop.

During the economic crisis known as Error de Diciembre or Efecto Tequila, Mexican President Ernesto Zedillo decided to provide bailouts to banks and financial institutions to save them from their financial problems. The money for the bailouts came from a fund known as FOBAPROA (Fondo Bancario de Protección al Ahorro). In December 1998, the president decided that all this money should be paid by all Mexican taxpayers. This decision left several generations of Mexicans in debt.

The worst event that happened to me in ninth grade was on the day that the school celebrated the posada. A Christmas booklet was handed to all the students; such a booklet contained messages students sent to other students. In that booklet, someone declared his love to Verónica Jiménez without signing his name. This was the message:

"From: Secret admirer

To: Vero Jiménez (201)

Message: I'm starting to fall for you. I wish you a merry Christmas."

As soon as I read this nefarious message, the lost years of my life started. Immediately, I felt heartbroken knowing I had a love rival. My only option was now to openly declare my love to Verónica Jiménez. Only in such a way could I change my love from a mere fantasy to a real relationship. But what would happen if Verónica did not love me back? What if she rejected my request to become my girlfriend? My love for Verónica was my only path to escapism from all the ills of life. Now I was threatened with the possibility of destroying what I thought was my only hope for happiness. Furthermore, I was afraid. I was extremely afraid that Verónica would reject me. The Christmas booklet with the dreadful message was given to us on Wednesday the 16th of December 1998.

I can remember that during those Christmas holidays, I went to the Vizcaíno Desert, Baja California Sur. I went to Guerrero Negro, where I visited the huge sand dunes. I collected a seashell of a bivalve that was so large that I had never seen one so big. It belonged to the species *Nodipecten subnodosus.* In the Ojo de Liebre Lagoon, I

saw wild coyotes (*Canis latrans*) and whales (*Eschrichtius robustus*) for the first time in my life. I also went to San Ignacio Kadakaamán to go from there to San Francisco de la Sierra to see the majestic archeological rock paintings. By the road to reach the rock paintings, I saw the famous wild boojum trees (*Fouquieria columnaris*). All these sights were amazing, but they did not make me feel happy. Very deep within my soul, I was still heartbroken due to Verónica Jiménez troubles.

I was surprised to have seen coyotes during the daytime. My grandfather Tomás said that in Atzitzimititlán, they were nocturnal. He was even surprised during the total solar eclipse that happened on Monday the 10th of September 1923 because in the road between Atzitzimititlán and Tlaxcala City, wild coyotes awoke at 3:30 PM and started yipping, thinking it was already nighttime. However, Atzitzimititlán was a highly populated place close to Tlaxcala City and Ojo de Liebre was in the desert in the middle of nowhere, so maybe coyotes could live life unbothered without changing their schedule.

In January 1999, I had a mystical experience. This time it did not happen while I was awake. I was asleep this time. I dreamed of a divine being that looked like a human. This being radiated light like the light that fire produces. That person gave me a message. I immediately woke up. It was still early morning before sunrise. I know that this was a mystical experience and not a normal dream because of the message that I received. The divine messenger told me that I should take whatever would be useful for me from the teachings of the one who is a sage.

On Saturday the 16th of January 1999, everything in my life was wrong because of the "secret admirer" that I figured would destroy my only source of escapism from all life's ills. That day I went to Salvador's science workshop as usual. After leaving the lab when the science workshop ended, I started to talk to my best friend and former classmate, Emilio. He went to school every Saturday to take the sports training classes. The coach that taught such classes was a physical education teacher nicknamed El Chamolo.

That day Emilio returned from buying a comic book. The book was "Spawn #79" (1999). "Spawn" is a franchise about a superhero. Emilio bought the book in a comic book shop, and in that store, there was a sculpture of Spider-Man attached to an exterior wall. We briefly talked about Spawn, which obviously led to talking about demons. Emilio told me that demons were not only fictitious characters. He told me that they truly existed in real life, and that the demons oppressed humanity, but it was possible to control them. He also said it is possible that one could free oneself from the chains that the demons imposed on us, and the solution was through the right use of

miracles. He said that divine philosophers were able to free themselves from the mind control of supernatural beings and even control them.

Then I realized that Emilio would be able to help me to solve all my troubles. Enríquez convinced me that supernatural powers were a solution for all possible everyday problems. I believed at that time that the fall of Enríquez was the result of stopping believing in miracles because he instead believed in all the lies that his father-in-law told him. I thought that, if Enríquez would not have denied supernatural forces and his ethical values associated to such belief, he would not have failed at life. Moreover, Emilio's teachings about demonic creatures that oppressed humanity made me remember the sinister beings that I saw in my childhood nightmares. His hypotheses also made me remember the conversations I had with my sixth-grade classmates. Hence, Emilio seemed convincing. I thought he could be my new teacher, someone who would allow me to get closer to the supernatural and help me to control occult forces.

I asked Emilio what I could do to obtain miraculous powers. He told me I needed to do as much as I could to be free from the control of demons. According to Emilio, demons were evil, ghostly beings that could scare people during nighttime. However, according to him, they were also pragmatic supernatural statespersons that have a totalitarian control over economically and politically powerful humans as well as over average people. It was clear to me that Emilio was a judicious master of wisdom. Emilio gave me philosophy texts so I would read them. We read books by Friedrich Nietzsche, horror tales by Lovecraft, poetry by Charles Baudelaire, and the classical novel about a vampire named "Dracula" by Stoker (1897).

Emilio was heavily influenced by goth subculture. Goths frequently wore outfits, jewelry, and accessories that were inspired by occultism. So many of the members of this subculture became truly interested in occult culture. Emilio believed that in the books, we could find keys to develop supernatural powers. His approach to performing miracles was different to the one used by Enríquez. Enríquez wanted to find the supernatural through meditation. Emilio wanted to find it through reading. I was surprised to know that since Emilio started to learn philosophy, he also started to have spontaneous, unexplainable mystical experiences that defied any possible rational hypothesis. It was obvious that he experienced similar visions as I. So, I was not the only person who experienced such phenomena. The mystical experiences motivated my spiritual master to study and learn more.

I felt that, thanks to miraculous powers, I would not need to practice escapism by falling in love with girls. With the aid of

supernatural forces, I would be able to solve the problems of my life directly, including the ones with Verónica Jiménez. From the day that I started to work under Emilio in his project of attempting to attain divine powers, the way I interacted with him changed. Now he was my teacher, and I behaved toward him in a reverential way. He was not a teacher in the same sense as the persons who delivered lessons in my school were my teachers. Emilio was, for me, by far more than that. I copied the kind of relationship that Enríquez originally had with the founder and owner of the sports federation. Of course, in this case there were no conspicuous uniforms or massive ceremonies. However, everything else was the same. In that way I idealized and started to worship the judicious Scholarch Emilio, the great philosophy teacher.

During the school year 1998–1999, a boy named Hirsch became a student in the school. He was from Argentina, and he liked science. His favorite pastime was spending several hours a day watching the Discovery Channel on television. At that time, the Discovery Channel only broadcasted serious documentaries about science and technology. One could think that spending a lot of time watching television would be undesirable. Nonetheless, the hours that Hirsch spent watching television allowed him to have a scientific culture that was above the average scientific culture of the other students. Hence, he was arrogant. As I was Salvador's favorite student in the science workshop, soon Hirsch wanted to outcompete me in matters of scientific knowledge. As a matter of fact, none of us had a lot of knowledge. However, our rivalry ended up becoming a friendship when Hirsch and I used to visit a pet shop named Acuario Lomas. In that pet shop, there were plenty of species of fascinating exotic animals that were sold there. In modern times, there are no pet shops in Mexico City that sell such a diverse inventory of living animals from all over the world. As Hirsch claimed to be a zoology expert and I also claimed the same about me, we had endless conversations regarding the biology of the animals of the pet shop. Some of the most impressive animals sold in the pet shop were the red-bellied piranha (*Pygocentrus nattereri*), the emperor angelfish (*Pomacanthus imperator*), the sugar glider (*Petaurus breviceps*), the Humboldt's squirrel monkey (*Saimiri cassiquiarensis*), the ball python (*Python regius*), the hyacinth macaw (*Anodorhynchus hyacinthinus*), and the emperor scorpion (*Pandinus imperator*). Acuario Lomas was found in Centro Coyoacán, a shopping mall that now is an abandoned building.

Jurisprudence

A hurricane is a meteorological phenomenon that consists of a great air

current that flows by moving in circles. They are similar phenomena to the twisters that scared the peddlers of Teotihuacan when I was a child. However, hurricanes have a greater magnitude. The peddlers thought that the twister was a demon. Nevertheless, to my knowledge, Emilio did not think that Hurricane Pauline was a demon or a life form. According to Emilio, demons are different from nature, but they can control it. They are especially good at controlling human nature, but also natural phenomena. According to Emilio, a demon can produce a whirlwind. If the demon is powerful enough, it can produce even a hurricane. Nonetheless, the whirlwind or the hurricane are not themselves the demons.

It is strange that Verónica Jiménez and Jazmín claimed to be able to summon demons. According to Adrián Natán, it was indeed possible to feel temperature changes inside the rectangle that was made with the six pencils. According to Emilio, demons did communicate with people sometimes. However, they have a chaotic and sinister nature. Hence, it is not very likely that Verónica Jiménez and Jazmín had true demonic communications at their own will. It is of course also possible that demons were interested in making me suffer, so they were interested in Verónica to use her as bait to attract me. In that way they would ensure that I would suffer all the bad feelings that I had because of my unlucky infatuation with her. Yet, I do not really believe in this hypothesis. The reason is that Verónica, in a way, was the gate to the teachings of Emilio. The teachings of Emilio were something good in my life, and demons never want good outcomes for humans.

The Catholics were extremely animistic. The Catholics from Teotihuacan that I saw in my childhood thought that the twister was a demon. In the same way, the Catholics of Mexico City that I saw in my teenage years thought that the circumhorizontal arc was the Virgin of Guadalupe. According to them, demons can have a whirlwind body and the dead people from past ages can have a body that is a colorful cloud. Emilio indeed believed that people could willfully transform themselves into clouds if they had enough supernatural power. Nevertheless, he was not one of the Catholics that claimed that the Virgin St. Mary transformed herself into a cloud. Nonetheless, under the paradigm of Emilio, this event would be possible.

Myths such as the story of King Etana flying by riding an eagle (*Aquila chrysaetos*), or the story of prophet Ezekiel looking at the apparition of the Merkabah, led Emilio to believe that reality is more complex than how most people think it is. According to him, there are too many unexplainable events that we prefer to ignore. Sometimes we do not ignore them, but we try hard to explain them in such ways that would not allow miracles or demons to exist in real life.

Emilio wanted to know a bit more beyond legends regarding this strange and hidden universe.

Why do all h-men herbalists and the farmers that are their clients believe that the aluxes exist? Why do they believe that there are supernatural people with divine powers that can grant miracles to them? They believe because they can see evidence of their power! When my mother attempted to photograph the pre-Columbian sculpture of the aluxe that was worshipped in Loltún Cave, the photography camera stopped working. Later, it kept working as usual. Maybe it was just a coincidence. However, we cannot consider all h-meno'ob and their farmer clients as mad just because they do not perceive reality as us. We are indoctrinated into the ideas of the materialistic philosophers from the Enlightenment period. Yet, there are ways of understanding reality other than the one that we have due to the indoctrination included in our Western education. All of us can willfully access these worldviews. The only condition is to stop strictly following the dogmas of Enlightenment materialism and positivism. Emilio was a philosopher involved in alternative cultural perceptions that was going to teach me how to perceive the Universe in different ways to be able to access realities that other people do not want to see because of their cultural dogmas.

Jazmín did not want to be like Jasmine from the film "Aladdin" (1992). However, for Emilio, all the characters from ancient legends can be emulated. We can emulate not only their personality or virtues, but also their actions and the way they interact with the Universe. According to Emilio, even the wildest forms of magic could be performed in real life. Of course, not every human would be able to access them. Nevertheless, the philosopher with special initiation secrets would be able to perform them.

I believe that when the angel was revealed to me in the mystical experience, and she claimed that I should "take whatever would be useful for me from the teachings of the one who is a sage," she spoke about Emilio the Sage. It would have been too much of a coincidence that just a few days after my dream, the spiritual master started to preach his message to me. Moreover, Emilio the Sage preached words to me that could deliver me from melancholy and make me a powerful, glorious person.

I am a diophysite regarding Emilio the Sage. He changed very radically. It is as if a divine being possessed him and spoke through his mouth, as philosopher Plato says about poets in his dialogue "Ion." I believe this because his change was so sudden. He became a mystical philosopher overnight. This also reminds me of what Mary Wollstonecraft said about physicist Isaac Newton. She said that "He was probably a being of a superior order, accidentally caged in a human body." Wollstonecraft (1792) wrote this in his book titled "A Vindication

of the Rights of Woman: with strictures on political and moral subjects."

The goths lived at the edge of reality. The unreal outfits and music allowed them to live inside a perpetual dark video game. Some of them did this to escape from reality for a moment. They imagined that they entered a world populated by vampires and fantastical beings. When Emilio the Sage became a goth and became immersed in this subculture, he attempted to go beyond what most goths experienced. He did not just play that he entered inside a fantastic universe. He literally entered inside a fantastic universe by being ready to believe what no one else believed and let himself be surrounded by a universe that, according to many people, only exists in dreams or in fiction. He was the storyteller of his own fairytale. Nevertheless, this fairytale was very different from the fairytales that my aunt Luisa used to tell me. This was a fairytale that became real...

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 9. *YERSINIA PESTIS*

Pope St. John Paul II traveled to Mexico. One of his holy masses would be in the Televisa soccer/football stadium, the Estadio Azteca, Coyoacán. This mass would take place on Monday the 25th of January 1999. To reach the Estadio Azteca, the pope would travel through the avenue known as Avenida Pacífico, Coyoacán, very close to my home. Therefore, I went to see him. His vehicle was moving slowly, so the pontifex maximus could bless all the spectators. Yamir was irate because of the state visit of the pope. He said that the reason was that people worshipped St. John Paul II instead of worshipping God YHWH (Allah).

Emilio the Sage and I started our first experiment. He said, "Perception always happens within our minds. Hence, it does not matter if we are dreaming when we are sleeping or if we are awake. The perceptions that we have about dreams or reality always occur inside our minds in both cases. Thus, the perception that we have of reality is like a dream inside our heads. In the same way that we can manipulate our dreams through lucid dreaming, we can indeed willfully change our perception of reality through our beliefs and actions. Now we have reached the time to change them..."

In all religions, the individuals who can attain supernatural graces follow an iron discipline. Emilio the Sage knew that he was unable to do something like that. However, as he saw I was highly motivated by his ideas, he encouraged me to do it. Soon I started to live following an almost Stoic lifestyle. I lived attempting to defeat all my fears and always telling the truth when I was asked any question. Emilio the Sage also taught me how to control my emotions before they would control me. The first effect of the teachings was the miraculous disappearance of the psychogenic illnesses that I suffered every time there were exams and that happened since I was in first grade. Soon I learned to voluntarily control my mood. I was able to willfully achieve euphoria or to feel extreme melancholy or to feel outraged. I only needed to desire it, and my mood changed, without any external stimuli leading to such mood changes. It was only the will of my rational mind.

Another one of the achievements of Emilio the Sage was that he taught me the Stoic doctrine of ancient Greece and ancient Rome that entailed facing the idea of my own death and accepting it. This involved accepting as well that all human beings are mortal and thus equal. No human being is above or below another one. Emilio the Sage taught me the doctrine of Stoic philosopher Marcus Aurelius described in the "Meditations" that entailed accepting that I

***Yersinia pestis* (Lehmann & Neumann, 1896) (Enterobacterales: Yersiniaceae)**

Illustration made by Rafael Calderón. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 858.**

could die at any time. Hence, I had to put as much effort as possible into any of my daily actions, as if it were the last moment of my life.

Furthermore, Emilio the Sage also taught me the doctrine of philosopher Epicurus written in the "Principal Doctrines" that involved thinking that the best attribute of death is that one cannot realize that one is dead when one is dead. The reason for this is that when one dies, all sensory and cognitive functions stop, so death is not bad. Accepting my own death allowed me to stop fearing dying. This is the phobia that I acquired when I was four years old, and I traveled with my family to Guanajuato City. To remember his own death, Emilio the Sage carried a memento mori. It was a necklace with a metal charm that looked like a human skull with a jointed jaw. This charm matched well with his outfit, as he was always dressed in black as if he were mourning because of the death of someone. In that way, he displayed that he was always thinking about death—his own death. I admired Emilio the Sage a lot for the charm that he owned. He also loved to wear T-shirts with images of human skeletons. This type of goth art was inspired by the vanitas and the danse macabre. These art themes became ubiquitous in European art after the Black Death, the infamous bubonic plague outbreak that was caused by the bacterium *Yersinia pestis*. The vanitas motif and the danse macabre remained extremely popular throughout the centuries when there were major plague outbreaks.

I felt proud, privileged, and honored of being the apprentice of Emilio the Sage. When Emilio the Sage started teaching me, we were both 14 years old. Emilio the Sage is celebrated on the 12th of March, the day when I fought the Princess of the Wraiths...

The ideas of Emilio the Sage were mostly based on Greek philosophy. In the ancient Middle East in the first civilizations of Mesopotamia and Egypt, there were two disciplines that were part of religious studies: moral theology and natural philosophy. Moral theology was written down in the texts of wisdom literature. Natural philosophy was the study of nature, the creation of the Deities. In Miletus, in what is now Turkey, philosopher Thales started to study the natural philosophy that he inherited from the civilizations that existed in past ages. With this aim, he founded a school to teach astronomy, astrology, and mathematics. This type of study of nature spread to all Asia Minor, Cyprus, the south of the Balkan Peninsula, the Peloponnese, the Greek islands, and Italy.

Wizard Empedocles lived in Sicily, an island that now is part of Italy. He started to study the Greek language with the same rational methods of natural philosophy. When tyrannies were overthrown in Sicily, lawsuits and political oratory were instituted as

methods of social organization. As a result of this, sophists Corax and Tisias, inspired by Empedocles's work, perfected the study of language and the human mind to devise speeches and demonstrations that would convince people. The best exponent of sophistic tradition was Socrates the Elder from Athens, a city that now is found in Greece. He invented the Socratic method, which is a technique to persuade listeners and to teach students. Following the Socratic method, many of Socrates's students—such as Plato, Antisthenes, and Aristippus—generated their own independent ideas thanks to the rational analysis that they learned from their teacher. Plato opened the Academy in Athens, and after that, many other teaching centers with different worldviews were inaugurated in that city. The Cynics taught in the Cynosarges Gymnasium, the Stoics in the Stoa Poikile, the Epicureans in the Garden of Epicurus, and the Peripatetics in the Lyceum.

Since then, Athens was considered a city of wisdom and the owl (*Athene noctua*), the holy animal of the wise Goddess of the city, was considered the symbol of wisdom. Athenian philosophy went beyond what the Sicilian sophists wanted. Athenian philosophers were not just interested in persuading people, they wanted to attain truth, and their methods aimed at that. Plenty of the ideas of Emilio the Sage were not purely Athenian, such as his interest in the occult and demons. The idea about demons oppressing humankind and keeping it ignorant, that was central to the doctrine of Emilio the Sage, comes from Gnosticism. In this Abrahamic religion, the only way to recover inner divinity is attaining divine knowledge (gnosis) that frees humans from the control that demons have over them.

Demons control humans by means of generating a reality that comprises a universe full of false delusions. Obviously, this myth is not just based on Judaism and Christianity. It is also based on the divine gnosis that allows humans to be like the Deities mentioned in the heka spells that are written down in the pyramids from the Old Kingdom of Pharaonic Egypt. An example of this is the Pyramid of King Pepi I. Its magic spells can be read in the work by Leclant et al. (2001) titled "Les Textes de la Pyramide de Pépy I^{er}." It was published in "Mémoires de L'Institut Français d'Archéologie Orientale" 118 (it includes two volumes). The central myth of Gnosticism is also based on the evil angelic princes that mage Zoroaster Spitama describes in the "Avesta" and in the Allegory of the Cave written by Plato in his famous dialogue titled "The Republic." The reason why Gnosticism has so many different sources is that Hellenistic Egypt, the place where Gnosticism developed, was multicultural.

The idea of Emilio the Sage about controlling demons with rituals came from

Neoplatonism—a mystical movement that developed in Alexandria, Egypt during the time of the Roman Empire in the sermons of Ammonius Saccas, who was influenced by Greek ideas such as those of Pythagoras and Plato, but also by occult traditions from Osirian mysteries, Judaism, and Hermeticism. A lot of Neoplatonism after Saccas by the influence of wizard Iamblichus was based on practicing theurgy, a system of magic that gave supernatural powers to the initiates in this mystery. According to theurgy, plenty of this magic was attained through controlling supernatural beings through rituals. As years passed, all Platonic philosophers practiced theurgy, even in Athens.

Emilio the Sage claimed that plenty of people found ways to control supernatural spirits by means of spells. However, the books written by these philosophers were considered so dangerous that they were buried under the foundations of buildings that would be used as churches. In that way, the holiness of the temples would protect society and its political class from such occult and ancient power. In a way, pre-Socratic natural philosophy, Sicilian sophistry, and Athenian philosophy are totally opposite to Gnosticism, Neoplatonism, and theurgy. The reason is that the first disciplines are rational, and the second ones are mysteries based on superstition. However, these mysteries are a result of a syncretism between rational Greek philosophy with initiation religions from the Middle East.

According to Emilio the Sage and to the mystics of Roman Alexandria, such as Torah scholar Philo in his book "De Congressu Quaerendae Eruditionis Gratia," there is no inconsistency in believing both rational Greek philosophy and mysticism. The reason is that, according to these people, the Universe is divided into such physical objects that are studied through reason, and such spiritual mysteries that are studied through having faith in secret doctrines. This is like Cartesian dualism, but at a more universal level and even more superstitious. Plato claimed in his dialogue "Theaetetus" that a virtuous person was like a Deity on Earth. Moreover, the most holy Hermes Trismegistus in the "Corpus Hermeticum" considered that the wise person who knows the laws of how the physical Universe functions thereby knows the mind of God YHWH, so said person is able to become a Deity. The theurgists looked for a Platonic divinity through moral virtue and a Hermetic divinity through mysterious initiation wisdom that manifested itself by performing miracles. The holiness that Emilio the Sage preached was such Neoplatonic divinity from theurgy. As well as Plato, Emilio the Sage never charged for his teachings.

In 1992, a Venezuelan army officer (Hugo Chávez) attempted a coup d'état in his country, so he was jailed. In February 1999,

he became the president of Venezuela and imposed a socialist dictatorship in his country. This event might seem trivial, but it was not; the effects that his government had on the whole of Latin America were devastating. The reason is that many countries copied to a greater or lesser degree many of his policies. This damaged democracy throughout this geopolitical region in the following decades.

Our history schoolteacher was Zoila. She set as homework visiting a museum known as Museo Franz Mayer. This museum is close to Alameda Central, a park in the historic city center of Mexico City. My favorite exhibits of that museum are the metal chest by Juan Pose that has a sculpture of Archangel Michael fighting the Devil, as well as the folding screen that depicts the Spanish conquest of the Aztec Empire. When I came back from the museum to my house, my aunt Ana Reyes told me that Iván had visited. He came with two boys that were his friends, all of them wearing the school uniform that is worn by students of the state-funded middle schools that do not charge any student fees. Ana Reyes told them the truth by saying that I was not at home, that I went to do my homework at a museum. Iván had not forgotten me. Neither did he forget his promise. He promised that he would kill me. According to the teachings of Emilio the Sage, that was the best opportunity to think about my own death.

In 1999, my prayers to God YHWH and the teachings of Emilio the Sage were inconsistent. The reason was that I always prayed to the Deity using the same orison since I was five years old. That was the time when I suffered from susto or espanto. After I was five years old, I never changed any words of my orison, I only added new words to the ones that I already prayed. Therefore, in my prayers I claimed that I feared stuff that, according to Emilio the Sage, I should not fear anymore, such as death. Moreover, I should not be afraid of nightmares anymore in case I would have them. According to Emilio the Sage, I should fight against them using lucid dreaming methods that he taught me. Despite this, I still prayed to the Deity to protect me from nightmares. However, when I was 14 years old, nightmares were extremely unusual. The reason why my prayers did not reflect the values of Emilio the Sage was not that I still feared the ills that I mentioned in my orison. I did not fear them anymore. It was just that throughout the years, my prayers became a fixed routine. This was my prayer when I was 14:

“I beg you, my Lord, to please keep nightmares or any other kinds of bad dreams away from me. I neither want to wake up in the middle of the night, at midnight, or in the early morning. I neither want to suffer from insomnia in the middle of the night, at midnight, or in the early morning. I neither want to suffer from poisoning or

envenomation and thus suffer from toxidromes, neuronal damage, or death. I beg you, my Lord, to keep me from dying. I do not want to die, please save me from death. Please also protect me from AIDS, cancer, and cholera. Please also protect my lungs. Please keep me from pneumonia, as pneumonia is very dangerous."

The initials "AIDS" mean acquired immunodeficiency syndrome. It is an illness caused by the human immunodeficiency virus (HIV). It is a zoonosis that jumped from chimpanzees (*Pan troglodytes*) and monkeys (*Cercocebus atys*) to humans. I was afraid of waking up before the right time and suffering from insomnia because that was the time when, according to me, ghosts visited my bedroom. I thought that wraiths visited my bedroom during most nights when I was between five and six years old. Even if I stopped believing in that, I never changed such words from my prayers. Strangely, after the cholera epidemic of 1995, I stopped modifying my prayers. Hence, my new problems such as the Verónica Jiménez trouble were never stated in my prayers.

Jazmín and Berenice, the best friends of Verónica Jiménez, knew that I was in love with her. They wanted me to become Verónica's boyfriend, so one day, they went upstairs to my classroom to look for me. They told me the date of Verónica's birthday, so I could buy a gift for her. According to Jazmín and Berenice, that would be a good opportunity for Verónica and I to start socializing and getting to know each other better. I did not buy a gift for Verónica, and I did not congratulate her on her birthday. I was indeed in love with her. Nevertheless, I feared that she would not feel attracted to me. That would be too disastrous for me, so I decided not to follow the advice of Jazmín and Berenice.

The spring and summer of 1999 were cloudy and rainy seasons. The darkness that was produced by the overcast sky was coincident with the melancholy that I felt because I wanted to be loved by Verónica, but I was not able to woo her because I feared that she would reject me.

In 1999, the school that I was attending became a construction site. Builders were making new classrooms by building new premises on the same land where the school was located. To build the new premises, they killed an enormous and beautiful tree that belonged to the species *Fraxinus uhdei*. As a result of this killing, the new building was a depressive architectural project. They changed the living wood and the lovely green-hued leaves with lifeless steel and bricks.

After visiting the Yucatán Peninsula so many times to watch birds, I started to write down in a notebook my notes about the natural history of birds that were the result of what I observed in the field. I wrote down brief information that I read about

the species together with the behavior that I personally watched. I illustrated such species profiles with drawings that I made using Prismacolor colored pencils. My friend Andreas saw these drawings and asked me to please write a book on the behavior of the birds of the Yucatán Peninsula. I never wrote that book. I only did that to attain self-satisfaction.

My mother thought that if she looked more beautiful, my father would stop being the lover of Nora and would return with her. To make herself more attractive, she paid an artist so he would make a peculiar tattoo on her. She tattooed her eyebrows and her eyelids so she could look as if she always had makeup there, but my father was not more interested in her than before having her tattoos.

The school administrators were immoral... Adriana, Mr. Robles, Mr. Molina, and Headmaster Sergio advertised the excessive use of recreational drugs to the children. They advertised the abuse of ethanol (C_2H_6O), marijuana (*Cannabis sativa*), and tobacco (*Nicotiana tabacum*). Alcohol is harmful because it can damage the liver, it is a carcinogen, and it is addictive. Marijuana is harmful because, in teenagers, it impacts brain development, thus diminishing learning abilities, verbal reasoning, and memory. Some people can become addicted to it. Tobacco is harmful because it can damage the respiratory tract, it is a carcinogen, and it is addictive. The school administrators also promoted in their lessons practicing paraphilic and risky sexual behaviors. This was more emphatically promoted by Adriana, the school counselor. In her speeches, any sexual psychopathology was seen as a virtuous behavior. The paraphilias and sexual perversions that were promoted by the school administrators increase the risk of suffering from sexually transmitted infections.

I did not like the school administrators. Yamir informed me about something that he referred to as the "secret witchcraft" (sic) of the school administrators. He witnessed without being noticed how the school administrators performed what Yamir named "witchcraft spells." According to Yamir, the "witchcraft" was always connected to the secret passage. I thought that Yamir was indeed right because I was one of the students that attended the public rituals performed after the death of Rubén Rodríguez and they were disturbingly weird rituals. Everything seemed to point out that the school administrators were members of a diabolical cult. Apparently, the hidden treasure of the school that was inside the secret passage according to Iván was in fact the object that the members of the cult worshipped.

On Tuesday the 20th of April 1999, there was an infamous school shooting in Columbine High School, Columbine, Colorado, United States of America. Two students killed plenty of persons before

killing themselves. Media outlets blamed Marilyn Manson and goth subculture for the massacre. This was of course a false claim. As Emilio the Sage, Yamir, and Jetro were fans of Manson and always dressed in black, Mr. Molina made an appointment to speak with them in his office. There, he ordered them to stop dressing in black and made them cry. That was because members of the goth subculture suffered discrimination because of the Columbine High School shooting. Emilio the Sage asked his parents to please change the school that he was attending. Yamir was also angry and wanted to change the school he attended. Lara and I created a conspiracy theory to explain these events. It was very unusual that as soon as Yamir started to speak up about the "witchcraft" of the school administrators, the school administrators started to harass him because of the music that he listened to and the way he dressed. Lara and I thought that it meant that Yamir was denouncing an inconvenient fact regarding the behavior of the school administrators and that they were retaliating because of that.

As I said before, the method of Emilio the Sage involved getting rid of all my fears, because we thought that the lack of trust in oneself was an obstacle to the development of supernatural powers. I was not able to face my greatest fear, Verónica Jiménez. After idealizing her so much, the fear that declaring my love for her would lead to a rejection made me extremely vulnerable. After some time, I stopped feeling love for Verónica. Only fear remained. I do not know what I was afraid of.

In case she rejected me, my dream of having a romantic relationship with her would not be destroyed, because my sexual desire for her was waning.

Martín, one of the physical education teachers, organized a dance competition every year. Some groups of students devised choreographies and danced in front of all the school while music was played. That year, Verónica Jiménez danced with her friend Jazmín. (If you want to listen to the music of that dance, please watch the video of "Chayanne – Salomé" (1998).)

Paco Stanley was a famous Mexican comedian. He was murdered on Monday the 7th of June 1999. Plenty of television shows and news programs spent a lot of time talking about the shocking news.

Pilar, our drawing teacher, set as classwork making an architectural model of a house. Each one of us drew all the parts of the model with a pencil. Then we cut the different parts with a box cutter. After this, we assembled the models. My architectural model was marvelous!

On Tuesday the 15th of June 1999, there was an earthquake whose epicenter was in Tehuacán, Puebla. I had never experienced such a powerful earthquake. My mother

picked me up from school as soon as the earthquake ended before the classes finished. She did this because she feared the subsequent aftershocks that could happen.

At that time, I preached the teachings of Emilio the Sage to Leonardo Soria, to Daniel Mastretta, and to Hirsch. Their friends listened to me as well, so soon I acquired the reputation of being a mage or a holy man. With the aid of Hirsch's ideas, I improved the ideas that Emilio the Sage taught to me. As at that time goths were very popular, many people claimed to be vampires. Arévalo, one of my classmates, claimed that once a goth girl cut the skin of his arm with a razor blade to suck his blood to emulate vampires. Other goths that wanted to be vampires only "sucked" people in their imaginary fantasies. These people mixed New Age spirituality with goth subculture by claiming they were psychic vampires. The belief in psychic vampires is an absurd superstition made up by Dion Fortune (1930) in her book "Psychic Self-Defense." However, goths happily embraced it.

Hirsch learned techniques to steal the "vital force" from people even if he was several meters away from them. A goth friend of his whose name was Juan Guerrero taught him to do that. I do not think they were truly able to magically steal the "vital force" from people. Nevertheless, Hirsch's ideas were consistent with Enríquez's spirituality and with the teachings of Emilio the Sage. In that way, I developed philosophical friendships in the school. These philosophical friends were boys that listened to the ethical and metaphysical ideas of Emilio the Sage and were ready to discuss such ideas. At that time, I was quite a good friend of Yamir, and Lara and I spoke to them at lunchtime. Their ideas would improve the philosophical knowledge I acquired from Emilio the Sage.

I was so immersed in the doctrine of Emilio the Sage that during my middle school graduation party I spent all the time with Leonardo Soria looking for demons in the gardens of the Cantil Sport Club, the party venue. Leonardo Soria also attended the graduation party even if he was finishing eighth grade instead of finishing nineth grade as I. Nonetheless, his sister Diana Soria was graduating from the same middle school as I, so that is why he was in the party. (To listen to a song of that party, please watch the video of "Lynda - Corazón" (1997).)

My middle school education was quite bad. The reason was that I attended a poor-quality school. I still can remember the topics we studied at middle school. The worst of all our classes were the lessons that involved learning to play a goddamn flute known as a recorder. I never was able to learn how to play it. (To listen to a song that my recorder schoolteacher wanted that I would learn to play, please listen to "Romanza Española.") It is wrong to teach

how to play recorder in middle schools. As Aristotle wisely stated in his treatise on "Politics:" "Flutes must not be introduced into education."

In Mexican middle school, basic algebra was taught. That is something that Mr. Guadarrama taught us with plenty of mistakes because he was not able to simplify algebraic expressions or to solve equations correctly, even if he worked as a mathematics schoolteacher. In our school we also learned how to draw lines and geometric shapes with a pencil on paper. We learned extremely basic equations of Newtonian mechanics and electricity. That is something that I learned quite well thanks to our excellent schoolteacher Ramón Vargas. The topics that we had to learn in biology were the theory of evolution by means of natural selection, ecology, and the parts of cells. In chemistry, we were taught exceedingly basic stoichiometry equations. In history, we learned about the oldest civilizations and about European history since the 16th century. We studied the map of Mexico to memorize the names of the states and their capital cities. We watched a horrible film named "El Héroe" (1994) that is about a suicidal woman who kills herself. We also read the following boring books: "The Illustrated Man" by Ray Bradbury (1951); "Lord of the Flies" by William Golding (1954); "Momo" by Michael Ende (1973); "Triptofanito" by Julio Frenk (1978); "Las Batallas en el Desierto" by José Emilio Pacheco (1981); "Ecología para Principiantes" by Federico Arana (1982); and "El Imperio de las Cinco Lunas" by Celso Román (1998).

During summer holidays I went with my parents to Chiapas and Tabasco, Mexico to watch wild birds. I saw a bizarre hummingbird with noticeably long tail feathers that looked like scissors (*Doricha enicura*). I also saw a rufous-tailed jacamar (*Galbula ruficauda*). At that time, my life list of birds changed. As I saw so many species during that holiday, I decided that it was nonsense to make a handmade drawing of each lifer on paper, to color it with colored pencils, and to write down its name below of the drawing. My life list morphed into a plain list of scientific names that were handwritten on a paper notebook.

The next school year, Emilio the Sage, Yamir, and Andreas changed to different schools. Yamir went to live in Ciudad Juárez. The spiritual master went to live in Cuernavaca. Andreas simply changed to a different school. However, Andreas returned a month later. The reason was that recreational drugs were not allowed in the other school.

I started studying in tenth grade, the beginning of high school. During the school year of 1999–2000, I frequently went to Andreas's house in Colonia Roma to play video games on his PlayStation console. I frequently skipped classes to go with

Andreas to an open-air market where he bought cheap, pirated, new video games. This open-air market was located next to the Zapata station of the underground subway rapid transit. As a result of truanting from school, I befriended two friends of Andreas who also skipped classes. They were Juan Ley and Héctor Jaramillo. They truanted school to purchase video games with Andreas. During tenth grade, I also used to get on with two boys who were my classmates during first grade, when fearsome Madame Klahr was our schoolteacher. These boys were Daniel Huerta and Gerardo Iñiguez. I frequently worked with them in teamwork assigned as homework. In our team, we also worked with other boys, Rodrigo Ávila and Eduardo Santos, who also became my friends.

I can remember that at the end of 1999, Juan Ley was very obsessed with a television show titled "Buffy the Vampire Slayer." He was always speaking about it.

The two water (H_2O) tanks on the floor above the ground floor of the school old building were removed when I was in tenth grade, and the entrance to the secret passage (that fascinated Iván) was bricked up. Before the school year of 1999–2000, all the students that attempted to enter the secret passage were expelled. Mr. Robles always claimed that there were rats (*Rattus norvegicus*) living there to scare the students, so they would not try to explore the secret passage. He was right, there were rats living there! They kept living there even when the entrance behind the water tanks was concealed.

Once I spent all the afternoon and the first hours of the evening at the school. I was waiting for Marco Vinicio, my drama schoolteacher. I would go with him and with all my classmates during the evening to watch the theater play "A Midsummer Night's Dream" by William Shakespeare, to Casa del Lago UNAM. That day, after sunset, I listened to the vocalizations of a rat in the part of the secret passage that was exposed. The visible part of the secret passage was locked with a padlock, under the steps of a metallic stairway that provided access to some classrooms. The small entrance door with the padlock and the steps of the stairway had metal bars. People were not able to access the secret passage without a key, as the metal bars were too narrow. However, the gaps between the metal bars were broad enough to allow rats to enter and exit the secret passage as many times as they wished to do so.

There were plenty of rats in the school that I was attending. Once, Daniel Mastretta killed one and placed the corpse in the door of the women's toilet as a joke, expecting that the girls would be frightened. He did this on a Saturday when he attended Salvador's science workshop. Children that wanted to be future students there visited the school to sit the admissions test. During recess time, the girls that were sitting the

admissions test went to the toilet, and suddenly, all of them screamed, horrified at the sight of the rat corpse.

During Rodrigo Ávila's birthday party, I talked to a friend of the brothers of Rodrigo Ávila. This guy said that he would devise an experiment to demonstrate that Charles Darwin was wrong, and that evolution does not happen by natural selection, but by acquired characters. He claimed that it did not matter if he was not able to achieve this aim in his lifetime, because according to him, after his death, he would keep living several lives through reincarnation until he was able to change humanity's views on biological evolution. I, of course, did not believe him.

During that time, I also took part in a debate in private with Juan Ley. It was a memorable conversation. He claimed that everything that happens during one's lifetime happens for a reason within a universal divine plan. I told him that it does not. I thought that the only genuine divine interventions in the universe were miracles, magic, necromancy, and mystical experiences. He replied, "Even if you do not believe it, this very chat happens for a divine reason."

During this time, Verónica Jiménez was very interested in ceremonial magic. She performed plenty of rituals using candles of different colors. Many of her classmates were quite concerned about this. They claimed this was evidence that she was indeed a witch, as she not only spoke with demons but also cast spells. Adrián Natán even claimed that Verónica psychically controlled her female friends. According to him, that was why she was always silent while the other girls spoke a lot. He said Verónica could speak through their mouths.

My uncle Jorge Reyes Mejía died. When my uncle was on his deathbed, suffering from hallucinations, my aunt Yolanda went to visit him at the hospital. Jorge Reyes Mejía told her, "I am surrounded by white flowers, and I see a kid." My aunt Yolanda did not see any white flowers (*Gypsophila paniculata*), or any children, as they were alone in a patient room inside the hospital. My aunt asked him, "Is the child Jorge Reyes Anaya your son?" He answered, "No, he is my brother Luis Reyes. He has come to tell me to go with him. I will soon leave and follow him..." My uncle, the birdwatcher that was righteous during his whole lifetime, died in a hospital known as Hospital Central Militar, Miguel Hidalgo, on Friday the 24th of September 1999. When he died, he was 62 years old. On the positive side, Esperanza, the widow of Jorge Reyes Mejía, returned to Tuxpan since my grandfather Tomás kicked her out of his house. He evicted Esperanza's children and said, "I only have one grandchild," referring to me as his only one. As soon as my uncle died, I stopped feeling proud of being Mexican and I stopped loving Mexico.

After the death of my uncle Jorge Reyes Mejía, my cat (*Felis catus*), whose name was Boli, and my dog (*Canis familiaris*), whose name was Pepa, started to feel ill. Each one of them went to a doctor's appointment with Dr. Del Río, their veterinary physician. He ordered clinical laboratory analyses. After seeing the results, he noticed that they were being poisoned with a natural plant toxin. Dr. Del Río said that it could have been the result of a neighbor trying to poison them or that they accidentally ingested a poisonous plant that we may have kept at home. My aunt Luisa told him that Pepa never left the home unaccompanied and that we did not have any poisonous plants at home. Dr. Del Río enquired if they ate something else besides industrial pet foods. My aunt Luisa said that they ate the leftovers of the food that Esperanza cooked for my uncle Jorge Reyes Mejía. Dr. Del Río concluded that Esperanza slowly poisoned my uncle so he would die sooner than expected. There were no ways of analyzing the corpse of Jorge Reyes Mejía, as Georgina Reyes told us that he was cremated immediately after dying, but she did not tell us where he was cremated or where his ashes were disposed. As Esperanza was not living in the house anymore, Boli and Pepa recovered their health.

After the death of my uncle, I inherited from him his collection of invertebrates in his natural history cabinet. I inherited specimens of coral skeletons, echinoderms, mollusk shells, and arthropods. Such specimens were in the house of my maternal grandparents, as my uncle gathered them before he married. Before dying, my uncle asked Esperanza to please give to me all his library that was in his house of Tuxpan as an inheritance. He asked for that because he knew that no member of his family was interested in reading about natural history and that I was interested in such topics. Esperanza never handed me the books. The reason was that Esperanza was jealous of my maternal family. She hated us. That was because she thought we were rich, and her family was poor.

By referring to the teachings of Emilio the Sage, I knew why Jorge Reyes Mejía and Enríquez fell into disgrace. Emilio the Sage thought that most members of society are demon-possessed. My grandmother Lorenza would be part of the demon-possessed society. This was because, as most human beings, she lacked gnosis. Therefore, Jorge Reyes Mejía, by blindly following her advice when he chose his wife, fell into the trap of the demons. As everybody knows, the main aim of demons is to ruin people that could potentially attain holiness. According to Emilio the Sage, if an individual does not have powerful theurgy spells, then the only antidote against demons is thinking rationally by oneself and avoiding following what the crowd says. Enríquez fell for the same reason. He followed the official demonic idea that success is measured with

money instead of keeping his mystical values that he thought for himself and that were very good for him.

Jurisprudence

The fact that all of us humans are equal because sooner or later we will die is not only useful to develop humility. It is not only our memento mori. According to Emilio the Sage, thinking about death helps us to end the ideas behind venerating people with authority or the superiority of certain social classes. After reflecting about the eventual death of all humans, we are not awed anymore by President Ernesto Zedillo, as he is going to die as all of us, therefore, he is equal to all of us, and his words are as equally important as the words that any of us can say. When thinking about the eventual death of all humans, we are not revering academics with great knowledge anymore. Even such professors that have been awarded with the Nobel prize are going to die as all of us, and their words are equally as important as the words that any of us can say.

By dispelling the concepts of authority and social class, the teachings of Emilio the Sage allow us to notice that the supposed differences between different groups of human beings are simply like the differences that exist between the non-human animals that live in herds. Such differences are not objective, they are simply the delusions of grandeur that the dominant animals impose through their hegemony over the other members of the herd. This doctrine taught by Emilio the Sage delivers us from the teachings of Enríquez that command us to respect and obey people with authority. Authorities are no different to us. Hence, their words and opinions are as valid as our own beliefs. We can indeed worship and honor authorities if we think that is needed in life, but there are no reasons for not worshipping and honoring ourselves in the same way. We should not forget that we are going to die and that authorities will also die like any of us. Their bodies have the same substances as our bodies. Thus, we have as much right to be obeyed as them. They are nothing else than mere humans, like us, that make up a story about their superiority that everyone else believes. In that way, they are enabled to oppress plenty of people in the same way dominant animals would oppress all the other individuals of their herds.

In my 1995 daily prayers to God YHWH (whose words continued being unchanged in 1999), I was extremely attached to my life, and I was too afraid of dying. This was of course the result of the great dread that I felt because of the respiratory illnesses of my childhood. Nevertheless, under the paradigm of Emilio the Sage, they were ignorant prayers because all of us humans are going to die, so there is no rational premise to feel so passionately obsessed with

being alive. We simply need to accept that we will die. Accepting our own mortality is the only shared teaching of Stoicism and Epicureanism. Therefore, it was the most important piece of wisdom in life for Emilio the Sage. He thought that to live life to the fullest, we need to stop being too worried about preserving our life. The recipe to live life to the fullest would be accepting our own death in the same way that we accept that there is day and night and that we accept that there is a rainy season and a dry season. The fact that we will eventually disappear is not something bad. Our culture makes us fear death, but death is neither as important nor as disastrous as some say it should be.

The school administrators pressured the students to practice paraphilic sex and to take drugs such as ethanol, marijuana (*Cannabis sativa*), and tobacco (*Nicotiana tabacum*). In this example, one can realize how dangerous it is to consider someone as superior, when they are human beings like us. My schoolmates believed what rogues such as Sergio, Mr. Molina, and Adriana said because they were not aware that they were mere humans that sooner or later would die like themselves. If they would have noticed what was the true value of the school administrators, they would not have followed their advice more than following their own ideas regarding sex and recreational drugs that they learned since their childhood. Or why not, even better, individually develop their own opinions regarding sex and recreational drugs through rational thinking?

Whatever would have been their conclusions, they would have been as relevant as those of the diabolical school administrators. Maybe even better if their conclusions were more rational or free from logical fallacies. But there would not be any reason to pay more attention to the advice of the evil school administrators than to the students' own thoughts. Both the school administrators and the students were mortal human beings with the same value. The ideas and thoughts of both groups were equally important. Nonetheless, rationally analyzing the paraphilic and drug-related advice of the sinister school administrators necessarily would lead us to reject their proposals and to create more edifying life plans for ourselves.

My middle school education was quite bad. There are not many options for education in Mexico. Most students need to study the contents of the educational curriculum of the Secretaría de Educación Pública (SEP), the government's federal executive department in charge of education in Mexico. The SEP educational curriculum for middle school just contains rubbish. However, I do not think the real reason why we attend school is to study the "educational" (sic) curriculum imposed by the government that is mere garbage. The true learning that we attain in school is the

result of interacting with our classmates that are the same age as us. That is how I obtained all the gnosis of Emilio the Sage.

Emilio the Sage justified prescientific or fictitious worldviews as valid ways to understand the Universe. Nevertheless, this would not entail saying that the friend of Rodrigo Ávila's brother was right when he stated that biological evolution does not happen by natural selection, but by acquired characters. Emilio the Sage considered as likely truths such claims that involved anomalies such as miracles or supernatural phenomena. Nonetheless, this would not involve rejecting some or all of the scientific explanations for normal life events of daily life such as biological evolution.

According to Juan Ley, there is a divine plan regarding what happens right now in all the Universe and what will happen in its future. He thought everything is predestined, as in the deterministic doctrine criticized by Roman politician Cicero in his essay "De Fato." I could not accept this idea as it was against my faith in the teachings of Emilio the Sage.

According to Emilio the Sage, free will exists. Thanks to such free will, we can perform philosophical analyses that allow us to make choices that come from our own reason. In a deterministic universe, free will is a delusion. Thus, any philosophy based on reasoning would be a self-deception. The reason would be that in a deterministic universe, our brains would be programmed by the Deities to think in such ways that they have already decided previously. Under this deterministic paradigm, brains cannot truly reason by themselves. The most important condition to have free will is that divine beings would not have absolute and micromanaged control over everything that happens in the Universe. Juan Ley's beliefs remind me of Laplace. This philosopher claimed that there could be a spirit that could know all the future by knowing the position and the momentum of all the particles that comprise the Universe. This is known as Laplace's demon. Laplace wrote this in his "Essai Philosophique sur les Probabilités" (1814). In quantum mechanics we infer that the Universe is not deterministic by describing everything as probabilities. However, this does not necessarily mean that the universe is not deterministic, only that we cannot measure a quantum system without interacting with it. For this very same reason we cannot objectively say how deterministic this Universe is. As this matter is unknowable, let us convert the teachings of Emilio the Sage into a fictionalist account of reality. It does not matter if they are true. If they help us, they are pragmatically justified. Virgil's poem the "Aeneid" is clearly fictitious, but it is not rubbish. It was good propaganda for Caesar Augustus, and if we read it, it is still good entertainment. Not everything needs to be non-fictitious to be useful. In

"Epître à l'Auteur du Livre des 'Trois Imposteurs'," Voltaire (1768) stated that "if God did not exist, it would be necessary to invent Him."

CHAPTER 10. *BRAHEA DULCIS*

Andreas loved soccer/football in all its forms. He watched all the matches played by professional teams on television and played it himself. He and some of his friends were members of a team, and they played against other teams of my schoolmates. Andreas's team was christened "Santa Inquisición." Andreas always wanted to talk about women. He talked about girls who were his acquaintances, about ladies that he watched on television, about divas that were Hollywood actresses, and about female characters in video games. He always talked about their breasts, their bellies, their buttocks, and their legs. Strangely, even if he was so interested in women's bodies, he was not interested at all in their personality or their ideas.

His everyday behavior involved mocking and verbally abusing all of us, his male friends. We were the same with him. Verbal abuse was so normalized that we were not angry about that anymore. Andreas always organized social gatherings in his house. He also enjoyed going out with many friends. I met plenty of new people by spending time with him.

Andreas's favorite video game franchises were Resident Evil and Final Fantasy.

During the holidays of the Day of the Dead 1999, I went to Zacatecas, Mexico. There, I visited the mines, the churches, the archeological site known as La Quemada, and I bought a mariachi hat.

My life changed when I turned 15 years old. The reason was the birthday gift that my aunt Yolanda gave to me. She bought me the game "Pokémon Yellow Version" (1998), and I became extremely addicted to it. It is about catching wild monsters to use them to fight battles. A friend of Andreas named Ignacio was also highly addicted to playing Pokémon. We both played together on our Game Boys while we talked to each other and exchanged creatures to complete the Pokédex entries. It took a few weeks for me to be a friend of the best and most prestigious Pokémon trainers of my school. "The best and most prestigious Pokémon trainers" is, of course, a euphemism to refer to the most addicted players.

Pokémon was a good form of escapism to avoid the emotional pain that I felt because of the death of Jorge Reyes Mejía. Pokémon helped me a lot in my life. During the time when the diabolical school administrators promoted recreational drugs as the best form of escapism for the sufferings that occurred in our lives, Pokémon provided to me a form of escapism that was consistent with the virtue ethics of the teachings of Emilio the Sage. Such virtue ethics were the

***Brahea dulcis* (Kunth, 1816) (Arecales: Arecaceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 858.**

opposite of the abominable drug addiction that was advertised by the evil school administrators. Hirsch always wanted to outcompete me in anything in life. Even though he became my friend, he still wanted to be better than me. As he was never able to surpass me in Salvador's science workshop, he became a Pokémon trainer to be able to surpass me as a gamer.

Humankind celebrated the end of 1999 and the beginning of 2000 as no previous change of year was celebrated in all my lifetime. All over the world, people were euphoric because of the turn of the millennium. In Western culture, the count of the years is based on the birth year of Jesus according to St. Dionysius Exiguus. If one believes in such dating, the turn of the millennium was the 2000th anniversary of the birth of Jesus. Strangely, Friday the 31st of December 1999 was celebrated as a radically different and very special New Year's Eve by plenty of nonbelievers. If someone did not believe in Jesus, the year 2000 would be like any other average year. There would not be any reason for it to be special. And even if one was a Christian, one could be skeptic, as there is no consensus among scholars regarding when Jesus was born.

When I was in sixth grade, Toño Barrera, Jorge López, and Emy claimed that during the end of 1999 and the beginning of 2000 the Antichrist would come. They claimed that during that time he would establish a kingdom of iniquity. As a result of this, God YHWH (Allah) would send Jesus with His army of angels. This would lead to the final triumph of the forces of good and to the end of the world. Yet none of these events happened...

Héctor Jaramillo, the friend of Andreas, had a female cousin that was 14 years old. Her crush was another friend of Andreas whose name was Antonio Magos. Héctor Jaramillo and his cousin planned to go out to the cinema theater with Antonio Magos, Andreas, Juan Ley, and I. In that way, Antonio Magos and the cousin of Héctor Jaramillo could spend some time together. That is how I met the cousin of Héctor Jaramillo, when we went to pick her up from her apartment to go with her to the movie theater. She lived on an avenue known as Avenida Río Mixcoac. When we were traveling in the sort of bus that in Mexico City is known as a microbus, a man asked the cousin of Héctor Jaramillo to please press the button that would allow the driver to know that he wanted to exit the bus. In this way the driver could stop the vehicle, and the man could exit. The button was quite far from the man, so he could not press it. The cousin of Héctor Jaramillo ignored him and did not press the button. It was obvious that she was haughty and that she was not a good person.

While we were inside of the cinema theater watching the film "Anna and the King" (1999) and the movie theater was totally dark, the cousin of Héctor Jaramillo

entertained herself by throwing food at other people of the audience while dissimulating that she was not the person who was throwing it. It was easy for her to do this because she did not buy such food, so she was not wasting her own money. Such food was bought and paid for by Juan Ley because he liked to please her when she requested that someone buy food for her.

Iván dialed my telephone number asking for me. I do not know how he was able to find it or who gave it to him. Of course, I did not want to talk to him. Speaking to such boy would be looking for my own doom, as he promised that he would kill me one day. The teachings of Emilio the Sage involved accepting my own death and not fearing it. However, they did not entail that I would look for my death no matter the cost. After Iván threatened me, attempting to contact him would be suicide. After this, Iván dialed my home telephone twice. My aunts always lied that I was not at home.

My mother bought a cell telephone for me, to be able to call me whenever I went to my classmates' houses, to the cinema theater with my friends, or to parties during nighttime. (To listen to music that was played at such parties, please watch "Sentidos Opuestos - Amor de Papel (video musical)" (1998).) My telephone was a Nokia 5120. Almost no one else had a mobile telephone in the school I was attending. Most telephones at that time were large devices that people could not take out of their homes and that were attached by a cable. When Hirsch noticed that I had a cell telephone, he immediately asked his parents to please buy one for him that would be the same model of the same brand. Hirsch and I played the game "Snake" (1997) on them. As the months went by, mobile telephones became increasingly common, and more classmates had them.

In some way, I needed to face my greatest fear, Verónica Jiménez. I realized I did not love her anymore. I was only afraid of her. I needed to talk to her, confess to her what I felt for her, and let her know that my freedom would be the result of telling my words to her. This became a requirement to attain all the power that Emilio the Sage promised me that I would be able to obtain. Then and only then, I could miraculously change all my life. The days and the weeks went by, and I was not brave enough to approach Verónica to talk to her. Something was strange; plenty of my classmates were brave enough to talk to the girls that were their crushes. Some of them were even able to start romantic and sexual relationships with them. I was not able to do something like that.

On the other hand, most of my classmates did not have enough willpower to refuse taking recreational drugs. Refusing recreational drugs was very easy for me. In that way I defied the sinister school administrators. I do not know why, in some instances I had so much willpower and

spiritual strength and in other instances I was too weak.

The Internet radically changed society. Firstly, it unified the world. Before the Internet age, it was split by frontiers and cultural barriers. The Internet changed the way people made financial transactions by expanding local businesses into global markets. Sharing information quickly allowed that science and technology would advance at a faster rate than during any time before. Hackers were able to access the databases of governments and corporations, so crime stopped being something that only occurred outdoors in city streets by expanding into the cyberspace. New technologies allowed that malware would be capable of causing severe economic damage on a large international scale. That was what happened with malicious software such as "Melissa" (1999) and "ILoveYou" (2000). My classmate Daniel Huerta was very excited by the Internet and all new technologies, and he thought this time in history was a good opportunity to become a millionaire such as his hero Bill Gates. His ideas were peculiar and paradoxical because at that time, the dot-com crash was happening. The dot-com bubble was a stock market phenomenon that burst. Plenty of Internet-based start-up companies failed.

Huerta convinced the despicable school administrators that it was important that the school had a website. He volunteered to create that website. As I was Huerta's friend, I was part of the team engaged in creating it. The other team members were Oziel González and his friend whose surname was Valdés. Valdés claimed that he was a hacker. Huerta was greedy; he always wanted more money, and as he noticed that my father had a lot of money, he would attempt to convince me to start a business with him.

I used to frequently visit Huerta in his house in Coapa together with another friend whose name was Gilberto Villeda. My mother did not trust Huerta. According to her, he only wanted my money. My aunt Ana Reyes quarreled with my mother, because according to her, she should not get involved in my life. If my mother would have been Luisa or Yolanda, she would have obeyed Ana. Nevertheless, she did not want to fulfill her wishes, so my mother told me to start a business with Huerta. My mother expected that he would steal my money. In that way, I would realize what kind of person he was and no longer spend time with him. Huerta wanted to open an Internet café with me under a partnership.

My mother bought a commercial property in a tall building in Colonia del Valle. In this way she fulfilled Huerta's wishes. She planned that after getting rid of Huerta, such commercial property would be useful to start a business there or to rent it. That commercial property was the same place where formerly there was a comic book shop. That was the place where Emilio the Sage bought the Spawn comic book that

was the origin of my apprenticeship when we started to talk about Spawn.

I shall tell the story of this comic book shop. In the years after the economic crisis known as Error de Diciembre or Efecto Tequila, the price of the American dollar (USD) increased a lot with respect to the Mexican peso (MXN). As a result of this, the price of comic books increased, so the owners of the comic book shop stopped selling cheap publications. Therefore, the demand for comic books decreased. Hence, the owners were not able to pay the rent. However, they loved the commercial property so much that they refused to leave it. The landlady, Eulogia Medina, sued them because they were neither paying the rent nor leaving the property. Thus, the owners of the comic book shop left the property—but before leaving, they took revenge on the landlady by throwing cement in the toilets to damage the sewer system. After the legal dispute, the landlady sold the property to my mother.

Many of the neighbors that lived in the same building where the comic book shop was found were happy that the store ceased business operations permanently. That was because they believed that such a place was a haunt of Devil worshippers. The neighbors claimed that in that place, people practiced rituals to venerate fallen angels and that the worshippers wore strange clothing. After the owners of the comic book shop left, the landlady hired a Catholic priest to exorcize any unclean spirits from the property. I think the neighbors and the landlady were wrong, there were no Devil worshippers in the shop. I am sure that they merely witnessed a tabletop role-playing game (RPG). RPGs are epic games that are played using dice. They involve several players playing fictitious characters and a gamemaster that leads the campaign. RPGs were played in the comic book shop. At that time, there were many RPG players but not as many as now, so most people would not know RPGs existed. As a result of ignorance, the neighbors thought that the tabletop games were rituals. Moreover, during that time there were plenty of goths dressed up in sinister outfits.

Nintendo México organized an event in a nightclub known as La Boom México. This joint was found close to the Toreo de Cuatro Caminos, Miguel Hidalgo. Now it does not exist anymore, but it was in the same place where there is now a shopping mall known as Diamante Toreo.

The event happened during the daytime on Saturday the 11th of March 2000. The aim of this event was to advertise the release of "Pokémon Stadium" (1999). In Generation I, there were 151 Pokémon. The last creature was difficult to obtain. Its name was "Mew" (1996). In the event, "Mew" would be given to people who would attend it. Hence, my parents and I bought tickets to go there. There were thousands of people in La Boom México. I had never been in a place that was so crowded. There were so

many people that one was anxious about not being able to move because of being surrounded by so many people packed inside the building. I could not willfully choose where to go anymore, as I followed the direction that people followed, because there were simply too many humans extremely close to each other moving in the same direction. Fewer "Mew" were handed out than the number of tickets sold, so people started to get furious. Everyone shouted, complaining. Fortunately, I talked to two Pokémon trainers that were among the people who got "Mew." They cloned it for me. Luckily, I returned home with "Mew." Having such a Pokémon made me extremely popular in the school I was attending.

I read a biography book. It was the autobiography of Miguel Álvarez del Toro (1985) titled "¡Así era Chiapas!: 42 años de andanzas por montañas, selvas y caminos del estado." The author was a naturalist that explored the wilderness of Mexico. I was deeply impressed. I would say that book was an inspiration to write the book that you are now reading. I did not read the biography as school homework. I read it as part of my personal interest in ecology.

When Héctor Jaramillo listened to me while I was preaching the teachings of Emilio the Sage, he thought I was a mage or a holy man. Thus, he once made an appointment with me to see his cousin, Mariana, so I could perform a ritual to ensure that she could become the girlfriend of Antonio Magos. In fact, I did not have any special powers to achieve that. However, after that meeting, I became a good friend of Mariana, the cousin of Héctor Jaramillo. As I got to know her better, I realized that she was not as vile as she seemed when we went to the cinema theater.

My grandfather Tomás died a few months after the death of my uncle Jorge Reyes Mejía. He died in his house of El Rosedal on Tuesday the 4th of April 2000. No one knows how old he was when he died, because he was not baptized or recorded in the civil registry office as soon as he was born and his birth year recorded was the year when he was registered, not the year when he was born. When my aunt Yolanda dialed our Tlaxcalan relatives to tell them about Tomás's death, they said that they already knew he died, because they heard his ghost wailing immediately after his death. His corpse was embalmed to be exhibited in public to my aunts and all their friends. That is a barbaric tradition of my culture. Following the laws of Emilio the Sage, I did not attend his funeral.

His body was cremated in a crematorium known as Izaz Cremaciones, Iztapalapa (19.34406791419016, -99.08025068144961). In that place, most of his body chemically reacted with oxygen. By means of that redox reaction, his most important body parts were converted to carbon dioxide (CO_2) and water (H_2O).

That gas and vapor were discarded into the atmosphere. According to my aunt Yolanda, his ashes were scattered on the mountain known as Cerro de la Virgen Inmaculada de Belén Atzitzimititlán, Tlaxcala (19.35596420076526, -98.18499938773728).

Strangely, in my culture, people give more emotional value to the ashes produced from the corpse of a dead person than to the smoke that is discarded into the atmosphere in the crematorium. I do not know why. Ashes are only the remains of the bones. The smoke includes all the rest of the organs, including the brain. Apparently, my culture values more the bones of a person than the organs that are the seat of the soul and life. This is not a fallacy of composition or division. If we do not want to see the smoke from the crematorium chimney as the organs, then we should not see the ashes as the bones either. Thus, if the ashes are not the bones of our beloved dead person, then there is no need to pay special respect to them. I am just trying to reason accepting the premise that the remains of a cremated body are truly what is left of our ancestor's body. If we claim that we do not honor the ashes of our ancestors because they are their body parts but simply because they are their remains, then we would have as much need to venerate the smoke produced from their bodies, as that is as much a remnant from them as their ashes.

I was proud of being Tomás's grandson. He considered me as his only grandchild. After his death I was quite proud of being part of the Teochichimec and Tlaxcalan lineages. As part of my ethnic pride, I started to wear the pre-Columbian Indigenous rain cape made of palm (*Brahea dulcis*) leaflets known as "nahual." I used it as a symbol to show my affiliation to my grandfather and to his cultural heritage. I did not wear it to cover myself from the rain. Therefore, I started to wear it even if it was not raining. This outfit was the inheritance of my Indigenous ancestors.

Three weeks after the death of my grandfather Tomás, I went on holiday. I traveled from Cancún to the south to visit Sian Ka'an Biosphere Reserve, Quintana Roo. There, in the tropical rainforest, I saw lovely wild animals such as the Central American red brocket (*Mazama temama*) and the collared aracari (*Pteroglossus torquatus*). In Chetumal, Quintana Roo, I saw for the first time a *Mimosa pudica*, the plant that swiftly moves itself when one touches its leaves. After that I went to the west, to Calakmul Biosphere Reserve, Campeche. In the tropical rainforest, I saw fascinating wild creatures such as the Baird's tapir (*Tapirus bairdii*), the Yucatán brown brocket (*Odocoileus pandora*), and the ocellated turkey (*Meleagris ocellata*).

Once, an adult middle-aged woman made a telephone call to my house. She was looking for me. My aunt Ana Reyes, who answered

the telephone, was worried. She wondered why an adult woman wanted to contact a 15-year-old teenager. She immediately called my mother so she would speak with this woman. The woman told my mother that she was Iván's mother. I had heard about her many times in her son's songs. Iván always sang that his mother was a prostitute who had sex with plenty of different men. Iván's mother complained to my mother that her son spent all his time with violent bad guys. Such juvenile delinquents were gang members. She said that she considered that her son needed an exemplary friend that would not be involved in criminal activities. Then she added that I would be such an exemplary boy. My mother knew well how Iván was. So, she told Iván's mother that she would not allow that I would spend time with a boy that could be a bad influence on me, such as her son. I think that that woman was an accomplice of her son, because he looked for me by telephone three times before. What I do not know is whether Iván still wanted to take revenge on me and kill me, or if he was just looking for a friend. In case he just wanted a friend, I, nevertheless, did not want a violent ruffian as a friend. I still remembered how he bullied me in seventh grade.

On Sunday the 21st of May 2000, Pope St. John Paul II canonized 27 Mexican saints that died during the Cristero War. This sealed the alliance agreement between the Catholic Church and the Mexican political party known as Partido Acción Nacional (PAN). The political ideology of PAN was based on the beliefs of the Cristeros. PAN was becoming quite powerful in Mexico; the Catholic Church started to help PAN by requesting that all Mexican Catholic priests would ask churchgoers to please vote for PAN candidates during the upcoming elections. The Catholic holy masses became instruments of political propaganda.

My father spent most of the time in his house that he bought for Nora that was in Jardines de Santa Mónica. Nora had several friends. My father used to go out with all of them and with Nora to bars and to rock concerts. He also traveled with all of them on holidays to many tourist destinations in Mexico or abroad. My father always paid for everything. (To listen to music by some of Nora's friends that were financed by my father, please listen to "La Maternidad del Alacrán" by Iconoclasta (1994).) What my father did not know is that Nora did not truly love him, and she only wanted his money.

Some of my father's male "friends" were not his true friends. These guys were in fact Nora's harem of men. She was able to have so many sexual partners because she gave money to them in exchange for sex. All this money was of course the money that my father gave to her in abundant amounts. They did not care that Nora was actively having sex with my father or with her other sexual partners. They did not feel any

jealousy over that. They did not love Nora. She was only their paramour who gave lots of money to them. The only one who loved Nora was my father. All Nora's sexual partners had other female sexual partners. Some of them even had another extramarital love affair. This situation was problematic. As Nora had sex with so many men who also had sex with other women, Nora suffered from a lot of sexually transmitted infections. Thus, my father infected my mother with human papilloma virus, with *Chlamydia trachomatis,* and with gonorrhea (*Neisseria gonorrhoeae*) several times. My mother was always cured with antibiotics and other drugs that were prescribed to her by her physician.

I felt very miserable because my father abandoned me. He loved me a lot when I was a little child and suddenly, he forgot about me. Dr. Octavio Martínez Natera gave me his telephone number, and he said to me that I could talk to him whenever I would need to tell him about my feelings of loneliness that I had because of my father's absence.

One day that my father arrived at his house, he saw Nora in her bed having sex with a mutual male friend that Nora obviously paid using my father's money. My father fought with his fists against his false friend. My father was extremely sad, and he told Nora that he was deeply hurt because of that betrayal. He said that he expected that she would be loyal to him. Once my mother knew about what my father said to Nora, she said, "Why did you expect that Nora would be loyal to you, when you never were loyal to me—I, who was your legitimate wife?" My father told my mother that he had a romantic relationship with Nora knowing that she was a woman who very easily had sex with any random man and who always wore outfits that showed off her body to sexually entice men. Furthermore, she flirted with every moderately attractive man she met. According to my father, the fact that Nora was very sexual and that she readily had sex made her more alluring. In the following months, my father increased his intake of drinks with ethanol (C_2H_6O). Every time he got drunk, he bitterly cried and shed lots of tears. After my father broke up with Nora, plenty of friends and relatives of Nora and Nora herself started to dial our home's telephone to attempt to obtain more money from us. They either attempted to scam us with voice phishing or claimed to be part of a mafia gang and stated threats of violence.

One of my father's fondest memories was when he traveled with Nora and all her friends to Orlando, Florida, United States of America to visit the theme parks. At the time, my father was feeling nostalgia for his relationship with Nora and decided to travel with my mother and I to Orlando to remember what he thought were "good old times." We stayed in the Walt Disney World Resort while my father showed us all the

places he visited with Nora and her friends. My physics schoolteacher Ramón Vargas told us to visit at least once in our lifetime the Kennedy Space Center in Florida. Therefore, I asked my parents to please go there. I thought all such rocket science and high technology was exciting!

I loved watching the birds of Florida. By that time, I was used to always watching the same bird species from Mexico City, the Balsas River Basin, Veracruz, Oaxaca, Chiapas, the Yucatán Peninsula, Jalisco, Sonora, and Baja California Sur. After visiting Florida, I thought it was a good idea to watch as many new bird species as possible from the largest possible number of places. First, I wanted to start watching all the birds of Mexico, so every month, I started to visit different places to watch new species. My parents bought new binoculars for me. They were the binoculars Samsung 7-15x35N. Emilio the Sage always mistrusted birding. He was skeptical of the apparent benefits and usefulness of such an endeavor. He always told me, "Watch girls, do not watch birds."

My grandfather Néstor died that year. In all my life, I only met him once, one day that I went to visit him. I did not attend his funeral because my mother did not want me to spend any time with my paternal family and because the laws of Emilio the Sage did not allow it.

Verónica Jiménez transferred to a different school. Suddenly, I could enjoy my life more. Her secret admirer (who declared his love for her in December 1998) never became her boyfriend, as she never had a boyfriend when she attended the same school as me. Maybe the secret admirer became the boyfriend of another girl. Perhaps he was as shy as I was. Nonetheless, I never knew the identity of Verónica's admirer.

According to Daniel Mastretta, the secret admirer was not a boy, but a girl. He claimed that the secret admirer was Jazmín. Mastretta's hypothesis entailed that Jazmín was a lesbian that was in love with Verónica. At that time, society was highly homophobic, so Jazmín never openly declared her love for her. A likely objection to this hypothesis is the fact that Jazmín wanted me to become Verónica Jiménez's boyfriend.

I bought the game "Pokémon Gold Version" (1999), and Ignacio bought "Pokémon Silver Version" (1999). In that way, we could exchange our monsters to complete the Generation II Pokédex. My favorite game in all my life has been Pokémon Generation II. It was essentially the same as Generation I, but it included new monsters in a new region. What is different and unique about Generation II is that it depicts Japanese folklore and culture in a splendorous way.

As Mariana, the cousin of Héctor Jaramillo, wanted to become the girlfriend of Antonio Magos, she went to the Hallowe'en 2000 party of the school that I was attending. (If you want to listen to the kind of music of that party, please watch: "Fey - Diselo Con Flores (Video)" (1998).) The boy that Mariana loved did not pay attention to her. However, she danced with Eduardo Santos. Since then, Santos started to spend a lot of time with Mariana. Mariana seemed to be interested in becoming his girlfriend as she always flirted with him and always went out with him on romantic dates.

One day, when Santos invited Mariana to go with him to his house in Coapa for the first time, Mariana met Santos's brother for the first time. That very same day, Mariana ended up French-kissing Santos's brother in the mouth and making out with him, and since then, Mariana started to have sex with him. The two brothers fought against each other by punching each other with their fists. Eduardo Santos felt so heartbroken and so humiliated that he wanted to kill himself one night. I talked to Santos that night and comforted him, giving words of encouragement to avoid his potential suicide. He finally decided not to kill himself.

During the holidays of the Day of the Dead 2000, I went with my parents to Torreón, Coahuila, Mexico. We visited the world-famous Santa Rita Mine and the Puente de Ojuela, the bridge that one needs to cross to reach the mine. The Ojuela Mine complex is in the State of Durango. Inside the underground tunnels of the mine there were lepidopterans. It was so strange to find lepidopterans living inside a mine. They were not big and colorful. They were small and pale moths.

We then visited the desert in the Mapimí Biosphere Reserve with a tourist guide for a camping trip. The tour guide spent all the time talking about how Jesus, the founder of Christianity, did not die crucified. According to her, he fled to China. The tourist guide claimed that she was looking for Jesus's descendants. Her views about Jesus went against official history. The tourist guide was so obsessed with Jesus's adventures in China, or was so ignorant about the Chihuahuan Desert, that she never talked about the place we were visiting. What was good about her was that she had organized everything with local farmers to establish a camping site in the middle of the desert. We spent the night there.

On the night of Friday the 3rd of November 2000, I saw how an enormous meteor or bolide fell from the sky. I have never seen such a big object in the atmosphere since. It looked like an enormous white fireball that exploded in the air while falling toward the Earth, something as big as the Moon. I do not exactly mean that it was as big as the Moon, only that it looked that large from my perspective.

During the early morning, I had insomnia, so I decided to walk in the dark desert. My mother decided to exit the tent and to walk with me. Suddenly, when we were walking near to the camping site, we started to hear packs of coyotes (*Canis latrans*) yipping. Every minute the packs were nearer to us than before. When we started to see them, the coyotes surrounded us. In that place, there was a tall water tower with a vertical ladder. To climb that ladder, one needed to use both feet and hands. As my mother thought that the coyotes would not know how to climb a ladder, we climbed it to flee the coyotes.

We were high up in the ladder until sunrise, as at that time the coyote packs had left that place. It was a frightening experience! Later that day I was able to see in the desert the famous tortoise known as *Gopherus flavomarginatus*. I also had a nasty experience—I defecated for the first time in the open air without using a toilet.

In Hirsch's class (1998–2004) there was a girl whose name was Manuela. She lived rather close to my house. Her home was behind the church in one of the streets adjacent to the park known as Jardín de las Rosas. She always dressed, showing off her bare midriff and her innie belly button. Moreover, she never wore sleeves, so she always displayed her bare arms. She was very hot. She wore the amazing Y2K fashion of the 2000s. It was the sexiest decade of all history as girls and young women could wear sultry outfits everywhere. It was lovely!

I started to visit Emilio the Sage more frequently. In Cuernavaca, he met a boy who was as old as us. He was a poet. His name was Daniel Saldaña París. Emilio the Sage instructed him in all his knowledge and in all his mysteries. Daniel Saldaña was his apprentice as much as I. Saldaña was a former member of a New Age cult where he learned to worship nature as if it were a goddess. This church abused its members. For example, Saldaña's uncle quit his well-paid job as a university professor to join the cult. Saldaña's father ended up in a hospital due to the extreme ritual he performed to please the leader. Moreover, Saldaña was indoctrinated into beliefs that he eventually regretted having believed because he thought they were immoral. However, as many cult survivors, he justified the psychological abuse. He thought all the churchgoers and leaders were doing good. As this church had a philosophical theology, Saldaña became a teenager that was able to deliver wisdom speeches. He also passionately enjoyed looking for the answers to the most important existential questions through dialectical thinking, using the beliefs taught by the cult as axioms.

The cult members indoctrinated Saldaña to talk to bonfires. They claimed that extraterrestrial people visit us to give us religious messages. They claimed that the most important aim in life is to spend a

night inside a hole dug in the ground with a lid on top of it. Saldaña became a disciple of Emilio the Sage to be able to continue his spiritual education. While he was his disciple, the cult was dissolved. Therefore, Emilio the Sage became his only spiritual authority. Saldaña was an actor in stage plays. Furthermore, as all poets, he loved writing. He did not only write as a pastime; he also submitted his texts to literary magazines, and he loved reading to us the poems he wrote. After listening to him, I started to write poems. Also, Mariana and one of my classmates nicknamed El Zambo wrote poetry.

I wanted to buy a new computer, so I asked Daniel Huerta, who claimed to be an information technology expert, what was the best machine. He recommended to me the most expensive one that was being sold at that time. My parents bought me that computer, the Gateway GP7-600. I transcribed my life list of birds from the paper notebook to a digital spreadsheet of "Microsoft Excel 9.0" (1999).

ICQ was the most popular instant messaging technology of that time. I chatted on my computer using ICQ with many of my friends. The instant messages were typed on the computer keyboard, they were not spoken. ICQ required that users had a nickname to display before what we wrote in the online chat. As a nickname, I chose 100% Punk. I learned this name from a graffiti tag that was written under an overpass not far from Maravatío, Michoacán, on the Federal Highway 15D. I liked it because I somewhat liked punk rock music.

The person with whom I chatted the most was Mariana. Her ICQ nickname was =xanath=. "Xánat" in Papantla Totonac means "flower." Mariana learned this word in a fairytale. It is a narrative about a princess that became a vanilla plant (*Vanilla planifolia*). You can read this story in the essay by Rodríguez López (2016) that is titled "La Vainilla (*Vanilla planifolia*): perfume y sabor de México que conquistó al mundo: I: historia de la vainilla." It was published in "Desde el Herbario CICY" 8: 89–92. Mariana was interested in occult powers, but not in the same way as Emilio the Sage and me. Mariana was a drug addict. She took every recreational drug she knew about. Her interest in recreational drugs allowed her to spend time with guys that loved psychedelic trance music and culture. Thus, she was influenced by the hippie mindset. This is because psytrance was the fusion of electronic music with the hippie parties that happened in Goa, India, during the 20th century. Goa was one of the most important places of the Hippie Trail, the route followed by hippies to look for Eastern spirituality. As Mariana was immersed in the hippie worldview, she idealized how entheogenic drugs were employed by shamans and traditional healers. She ended up thinking that drug-

induced psychedelic trips and magic meant the same. She learned such in the books by Carlos Castaneda, a hippie who claimed that magical experiences could be attained by taking peyote (*Lophophora williamsii*), downy thornapple (*Datura innoxia*), or psilocybin mushrooms (*Psilocybe mexicana*).

When Mariana found out that I was a student of the supernatural, she became interested in all the dogmas I believed. She wanted to incorporate the beliefs of Emilio the Sage into her own ideas. I tried to remember everything that Emilio the Sage said regarding occultism and tried to interpret his wisdom sayings according to my own experiences. In that way, Mariana would be able to understand them and to use them in everyday life. After some time, my conversations with Mariana using ICQ became the merriest moments of my daily life. I did not just tell her my adventures attempting to watch the greatest possible number of wild birds. I also attempted to decipher the cryptic teachings of Emilio the Sage.

You can see Mariana on **page 660.**

The ICQ online chat was like a mutual diary where Mariana and I told each other about our private lives. We listened to each other. We knew our hopes, dreams, and problems. If any of us was sad, the other one comforted the distressed person. I was fond of her. In fact, we did not speak about the same stuff. I mostly spoke about birding and philosophy. Mariana spoke about recreational drugs and sex, as she had plenty of male lovers at the same time. She had sex with all of them. That was because she learned to be sexually promiscuous at music festivals. Even if she had so many sexual partners, she did not feel satisfied, because she claimed that she loved Antonio Magos. She was sad that he did not pay attention to her. She was distressed by the fact that he was the boyfriend of a girl that was nicknamed La Tabla. La Tabla, as Antonio Magos, was my classmate.

Andreas was deeply in love with La Tabla and was pained because Antonio Magos, one of his best friends, was the boyfriend of the girl that he loved. Andreas loved La Tabla so much that one day he gave her a flower of *Strelitzia reginae* as a gift. La Tabla suffered from anorexia nervosa, so she frequently fainted because she lacked enough nutrients in her body. At that time, media outlets and fashion designers idealized girls and women that were extremely thin. They claimed that thinness made girls and women beautiful. Hence, plenty of girls and young women became ill with eating disorders such as anorexia or bulimia.

This fashion already existed in the 1930s among models from Paris, France. Afterward it was popularized by Princess Aurora, a Disney character from the film “Sleeping Beauty” (1959) and by the famous

doll Barbie by Mattel. Nevertheless, this body shape was not massively imitated by all girls and young women until the heroin chic fashion trend of the 1990s. The origin of this trend was that fashion models were commonly addicted to recreational drugs that changed their behavior and thus their body shape. Even if the heroin chic trend ended, idealizing extreme thinness continued during the decade of the 2000s with the Y2K fashion. If you want to see thin Princess Aurora, please watch "An Unusual Prince/Once Upon a Dream (From "Sleeping Beauty")" (1959). If you want to see Barbie with the stereotypical heroin chic look, please watch "Barbie as The Princess and The Pauper - I am a Girl Like You" (2004).

In 1943, there was a fatal accident in the Catholic cathedral of Mexico City. In the cathedral, there are huge bells in the tall bell towers that are used for the calls to prayer and for the calls to worship. One day, a bell ringer was accidentally hit by a bell and died. As a result of this, the bell was punished for its sin. In 2000, Archbishop Norberto Rivera Carrera pardoned the bell, and it was again used in a bell tower. Even if it was just an object, it was judged as if it were a human being. Something similar happened in Mexico City in 1723 when the Holy Inquisition judged the corpse of King Nayarit many years after he died. He was found guilty, and the corpse was punished by being destroyed.

Jurisprudence

What was the Pokémon number 151? Was it only 0s and 1s that contained instructions made up by coding? Emilio the Sage thought that society brainwashes us to engage in irrational practices. Society drives us to madness by making us passionately desire something such as "Mew" (1996). Something that was nothing else than 0s and 1s.

According to Emilio the Sage, funerals are atrocious social rituals. During funerals, people become more hypocritical than average humans on normal days. Whoever are not hypocrites gather at funerals to share unpleasant emotions that only weaken and impoverish the human soul. Therefore, funerals are educational experiences that teach humans how to be vile creatures with unclean and weak souls. Hence, they are traditions that diminish human power. Every virtuous human ought to avoid them.

There is a peculiar relationship between using entheogens and spiritual practices in several cultures around the world. That was not just Mariana's subjective opinion. However, that was not the reason why Mariana started to take recreational drugs. She started taking such illegal substances to be able to perform a banned activity that was rejected by people belonging to the average culture. She did this because she

hated the morally accepted behavior sanctioned by society.

By being socialized into the hippie mindset popular among drug addicts (a part of the psytrance culture), she became interested in spiritual ideas. For Emilio the Sage and me, the spiritual was something totally different. Emilio the Sage referred to spiritual as "everything that is unknown that apparently exists in the world but that cannot be tested using the scientific method because it cannot be falsified." It was a similar concept to the "God of the gaps," defined by Nietzsche in "Also Sprach Zarathustra: ein buch für alle und keinen" (second part, 1883).

Nevertheless, according to Emilio the Sage, it was obvious that not all epistemological gaps about the universe or nature can be filled with science, as not all possible postulates about reality can be subjected to controlled experiments. It seems to me that before Nietzsche, people already labeled whatever unknowable phenomena as magic. Maybe the strange and apparently supernatural trips that shamans experience with the use of drugs are considered as magical experiences because they cannot be fully explained by the average logical and empirical reasoning of the inhabitants of the tribes where such shamans live.

The fact that psychedelic trips exist makes me doubt the objectivity of the human brain to perceive reality. The human brain is not an organ that was spontaneously created to perceive the Universe objectively. As a biological organ, the human brain is the product of the mutations happening in several genes followed by the natural selection of such genes throughout several millions of years. Thus, it evolved to perceive the Universe in such a way that would allow the best evolutionary success to our ancestors. It did not evolve to be able to perceive reality in the most objective way possible. This makes me wonder up to what point the perceptions of people hallucinating with an entheogen are not also valid understandings of reality, even if it is not the best possible understanding of it to be able to have evolutionary success as a species?

That is why Emilio the Sage said that we should not trust the dream that we call reality. Citing philosopher David Hume, he claimed that as we cannot perceive reality beyond our body senses, we cannot be certain about what exists outside of us. You can read this in the book by Hume titled "A Treatise of Human Nature: being an attempt to introduce the experimental method of reasoning into moral subjects" (volume 1, 1739). Mariana shared with Emilio the Sage such skepticism about reality. In the same fashion as Emilio the Sage, she considered that the perception that most people consider as reality is an inferior way to understand the Universe compared to other forms of perception that are purer.

Evolutionary processes have shaped the human brain into an organ whose only function is to enable our successful journey to adulthood, sexual reproduction, and passing down the genes of our genome. The brain is biased to achieve that result, which is the reason other forms of perception were considered purer and more truthful.

Physicist Isaac Newton started a great cultural revolution in this world. His friend John Locke was inspired by him to create a rational political system free from religious metaphysics. In fact, the positivist social sciences of Auguste Comte were developed by attempting to imitate the scientific method of physics in the study of human societies. According to me, that positivist project was a failure, but it shows us how Newtonian science and its great achievements inspired many people to try to apply science to human activities that have nothing to do with the study of the non-human physical nature of the Universe.

One such attempt was when Aleister Crowley strived to explore magic with rational hypotheses and experiments. Crowley (1909) described his aim in his "Editorial" in "The Equinox" 1(1). Emilio the Sage was not a scientist. In fact, he had a scornful opinion about positivist metaphysics. Nonetheless, he wanted to test several magical postulates to find out what worked and what was useless. However, he did not want to divulge such results. That was the difference between his ideas and Crowley's. Emilio the Sage considered that magic was a personal path that individuals in their respective societies and times needed to follow with the means that they have available. Each path needs to be unique and different. Divulging magic to the public, as Crowley wanted, would only end the personal individuality of the magical quest, as everyone would then follow the same path. Emilio the Sage did not want to create a community of mages analogous to the scientific community. Transforming magic into a science would make that magic would lose its potential to explain all the strangeness of this Universe. It would then become one more scientific discipline with its own "God of the gaps." Despite this, Emilio the Sage applied the empirical method of science to magic to create a magic system that would not be wholly mystical. He wanted to develop a magic system that would involve rational philosophical features.

The thinness of La Tabla allowed her to have such sex appeal capable of torturing Andreas and Mariana with lovesickness. Is it true that extremely thin girls and women are more beautiful than girls and women that have healthy bodyweights? Female beauty is subjective, but health is not. Our culture indeed conditioned people to believe that extreme thinness and thus illness beautifies people. As the whole society was indoctrinated into this belief, all civilization indeed perceived exceedingly thin girls and

women as gorgeous. This shows one of the central dogmas of the philosophy of Emilio the Sage.

The dogma is that, for average, ignorant people, reality equals the worldview imposed on us by society. In this case the imposed worldview is the relationship between women's beauty and women's bodyweight. Nonetheless, as Emilio the Sage tells us, very often such imposed worldviews are demented nonsense that only harms us. However, as we are not ready to perceive reality independently of society's perception, we do not see the Universe objectively. If La Tabla and all the supposedly stunning girls and ladies would perceive reality independently of society, then they would be skeptical of the insane social aesthetic principles that made them ill to please people's expectations. Hence, according to Emilio the Sage, it is very important to find new ways of perceiving reality and new ways of thinking beyond what most people accept as truth.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 11. *STREPTOPROCNE ZONARIS*

Oziel González, his friend Valdés, and I finished making the website for the school. However, when Daniel Huerta showed it to the school administrators, he told them that they needed to pay money to him and to his friend Gilberto Villeda for designing the website. That was totally unfair. It was inexcusable because this website was made by Oziel, Valdés, and I. Huerta's only tasks were convincing the school administrators to allow him to make a website for the school as a student project and gathering us, his friends, so we could make the website. Nevertheless, he planned on obtaining money from the website design and not paying us for that.

Gilberto Villeda never worked designing the website. His only merit was being Huerta's friend. Sergio, the school principal, did not pay any money to Huerta and Villeda. The reason was that Huerta initially told him that making the website was only an educational school project by the students. When Huerta showed the finished website, he said it was not a mere student project and asked for money for it. He attempted to fool the principal by selling him a website design that he and Villeda did not even design! The cost of the website was in fact higher than the price of similar websites made by professional website designers. My mother was right: Daniel Huerta was a scammer, but would he behave in the same way regarding the Internet café he was about to open with us?

During the time we were making the website, if Internet users attempted to access it, there was a sign that stated the website was under construction. After that, the school website remained without any content until 2005, five years after we created the web address for the prospective website and three years after Huerta and I graduated. The design of the school's first website in 2005 was not the design Huerta attempted to sell.

Mariana and I started to create a system of spirituality linked to my life list where I wrote down the species of birds that I watched while birding. We believed that the birds that I was watching were the species that I deserved according to my spiritual and philosophical development. Moreover, we thought that I acquired new spiritual, miraculous, or metaphysical skills according to the species that I was watching and adding to my life list. Hence, increasing the number of birds in my life list would directly change the type of person I was in my daily life. Soon we devised rituals to honor and worship my life list. We also made up a method to predict future events using it. Mariana did this because she often played the sortes biblicae using scissors as

***Streptoprocne zonaris* (Shaw, 1796) (Apodiformes: Apodidae)**

Illustration made by Camus Altamirano. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 858.**

pointers. This is a divination game using the "Bible" and the "Deuterocanonical Books." In his "Confessions," St. Augustine describes how he performs the sortes biblicae after a divine voice tells him to play it, but no scissors are mentioned, so I do not know how Mariana learned about the use of scissors. The disembodied heavenly divine voice described by St. Augustine is known in Hebrew as bat kol.

As my hobby was birding, my mother decided that we should visit the Sótano de las Golondrinas, San Luis Potosí, Mexico. This is a grand pit cave inhabited by wild swifts (*Streptoprocne zonaris*) and parakeets (*Psittacara holochlorus*). I had already seen the white-collared swift in Villahermosa, Tabasco, one year before, and I had seen the green parakeet previously in El Tajín, since I was a child when I used to go to Tuxpan to visit my uncle Jorge Reyes Mejía. As my birding interests were not just focused on listing birds, but also were ecological and ethological, I found the bird colonies of the shaft cave appealing.

The people of Aquismón, San Luis Potosí still wore colorful folk costumes and spoke in Huastec. On the road between Aquismón and Tamapatz, San Luis Potosí, I saw a great rock where there was an altar of the Virgin St. Mary of Guadalupe. In front of the image of the Virgin, an elderly farmer was pouring aguardiente from a bottle with his right hand. The aguardiente was falling in front of him to the ground. Aguardiente is a beverage with ethanol (C_2H_6O). The aguardiente that is traditionally drank by Huastecs is made of sugarcane (*Saccharum officinarum*) and fermented with *Saccharomyces cerevisiae*. The Catholic ritual that was practiced by the elder is known as libation. It comes from ancient Mesopotamia. Catholics learned it from the Jewish "Tanakh" as it is considered a holy book in Catholicism. I found the libation so fascinating that years later, I used the same ritual to honor my teachers.

During that time, there were no maize fields (*Zea mays*) close to the Sótano de las Golondrinas, as there are plenty of them now. During that time, the vertical cave was in the middle of the cloud forest, surrounded by it. The afternoon was dark and humid due to so much water vapor (H_2O) in the atmosphere. There was so much humidity in the air that there was a cloud of fog inside the pit cave and mist in the forest that surrounded it. The flocks of swifts accessed the shaft cave by swiftly flying through the cloud. They were so fast that they made a sound with their wings like a buzz by cutting their way through the air.

Back home, the best friend of Emilio the Sage was Jetro. When Jetro was a child, he was a fanboy of the animated cartoon "Beavis and Butt-Head." The protagonists of this television show broke all mores and social norms. When Jetro became a teenager, he loved punk rock and started listening to anarcho-punk bands. (To listen to one such

band, please watch "Chumbawamba - Tubthumping (Official Video)" (1997).) Due to his subcultural background, Jetro became interested in the underground scene of the Mexican version of punk anarchism. In most countries anarcho-punks simply adopted the official anarchist political ideology.

However, in Mexico during the late 1990s, anarcho-punks created their own ideology that was different from political anarchism. It may have been because they did not like reading, so they developed their own anarchism instead of reading the books of the top anarchist gurus.

Mexican punk anarchism was very different from the utopian anarchism of Pierre-Joseph Proudhon and of Mikhail Bakunin. Unlike utopian anarchists, Mexican anarcho-punks did not want to create a society that was free from governments. Mexican anarcho-punks were focused on an individual resistance against the people who wanted to give orders to them. This was not the kind of freedom that libertarians wanted. The reason is that right-wing libertarians want to practice free market (laissez faire) or to be free to pay whatever amount they wish to their workers without any government intervention. Left-wing libertarians want to restrict the amount of legal control that the government has over citizens through usually repressive means. That is not the kind of freedom that Mexican anarcho-punks wanted. They aspired to behave in their daily life in whatever way they fancied and not be repressed or oppressed by other people for doing so. This freedom entailed being able to behave against any social norm that they despised. In this way, the "authorities" they faced were rarely employees of the government. They were more commonly micropolitical authorities, such as their parents or schoolteachers.

Emilio the Sage was in favor of breaking social norms. He started to be interested in such topics while being a fanboy of Marilyn Manson, because Manson's art was an open defiance against the aesthetic values of the establishment. As a result of this, Emilio the Sage was interested in the Mexican anarcho-punk speeches of Jetro, as well as Plato's virtue ethics and Stoic ethics. These ethical theories were popularized by St. Paul the Apostle in his epistles, and by prophet Muhammad in the "Qur'an."

The synthesis of Platonic and Stoic ethics popularized by Christianity and Islam have always been seen as the most excellent and orderly way of living in Western culture. This may seem, in most people's minds, to be the most compliant and social-abiding lifestyle. Thus, it may seem paradoxical that Emilio the Sage was in favor of breaking social norms. However, it is not as inconsistent as it seems. Even if all religious people praise their religious ethical ideology while they are in their churches or mosques,

in practice, no one lives according to such standards due to hypocrisy.

According to Emilio the Sage, living in accordance with ancient Greek virtues in our daily lives is by itself a rebellion against the practical social norms that people follow in their everyday lives. In the same way as Diogenes of Sinope during antiquity, Emilio the Sage considered that the only way of living virtuously was by breaking the rules established by the corrupt demon-possessed people in power. Virtuous life was a form of resistance and defiance. Virtue not only allowed Emilio the Sage to break social norms. It allowed him to do what he wanted more than anything in life, perceiving reality differently. This perception allowed him to conclude that the "official version of reality" is not the only possible way of seeing life.

If you want to read about Diogenes's resistance against hegemonic values, please read "The Life of Diogenes of Sinope" in "Lives and Opinions of Eminent Philosophers."

Emilio the Sage was inspired by Jetro's Mexican punk anarchism to preach an epistemological way of rebellion linked to his occult Gnostic beliefs about supernatural forces. His viewpoint allowed him to reject most established ideas that were accepted by most people. Enríquez said that we ought to always follow and respect authorities. On the other side, Emilio the Sage thought that because society was controlled by demonic powers, we always need to doubt any opinion or commandment issued by people in power. In fact, because people in power need to keep said power, they are less reliable than those who lack it. The reason to conclude this is that people who do not have any power do not need to maintain agendas to keep themselves in power. The powerful do need such devices to avoid losing what they love more than anything else (their power).

According to Emilio the Sage, we should not trust what most people think, either. Most people are seduced by marketing and propaganda. Such brainwashing techniques are paid for by such people who have enough money and interests to spend on that; the powerful. Hence, according to Emilio the Sage, it is always good to go against almost every established belief or doctrine. We must even oppose the views of any people who are popular and followed by multitudes. Of course, if the ideas of such people or those held by most members of society are rational and true beyond any reasonable doubt, we then do need to believe in them. Nonetheless, most of the time it is better to mistrust such ideas and trust a more reliable epistemological source. For Emilio the Sage, such a source would come from somewhere where there was not a lot of money or power involved. Thus, I respected Emilio the Sage and his teachings more than my schoolteachers and their lessons. That is because my schoolteachers

were mere employees that were forced to work disseminating an education system imposed by the people in power. Whereas Emilio the Sage was a free boy giving his opinion in good faith.

In this, Emilio the Sage differed a lot from the Stoics that lived during classical antiquity. Ancient Stoics loved that people were servile and would live according to rules that prioritized society over individuals. On the other hand, Emilio the Sage was in favor of free thinking and individuality among citizens. Emilio the Sage was a Stoic only regarding emotions and cognitions, not regarding politics and epistemology.

I went to a hotel known as Los Cocuyos in Huatusco, Veracruz to watch birds. Behind the hotel there was a cloud forest that belonged to the hotel. There, I watched imposing birds such as the pheasant cuckoo (*Dromococcyx phasianellus*), the mountain trogon (*Trogon mexicanus*), the Lesson's motmot (*Momotus lessonii*), the golden-olive woodpecker (*Colaptes rubiginosus*), the strong-billed woodcreeper (*Xiphocolaptes promeropirhynchus*), the slate-colored solitaire (*Myadestes unicolor*), and the black thrush (*Turdus infuscatus*).

The occultist defiant epistemology of Emilio the Sage appealed to Mariana. She thought that the supernatural did exist, but that people with economic and political power, the people that Emilio the Sage would consider as demon-possessed, claimed that it did not exist to maintain their hegemonic worldview unquestioned. Mariana also thought that this was why psychedelic drugs were also banned or were taboo. This was, according to her, because the people in power did not want average people to access the supernatural powers that can be attained from exploring different worlds that are found taking entheogens.

I did not support her hypothesis because in the school that I attended, taking recreational drugs was allowed by the school administrators. In fact, it was not just allowed—students were pressured to take recreational drugs by schoolteachers that appealed to their own authority. Therefore, I thought that taking recreational drugs was something that every individual ought to oppose to avoid being idiotized by the demon-possessed people in power. Mariana and I always discussed the implications of the views of Emilio the Sage in the ICQ online chat. She liked to talk to plenty of members of subcultures such as hippie potheads, Rastafarians, skateboarders, punks, and goths in the Tianguis Cultural del Chopo, Cuauhtémoc (19.449085477795652, -99.14975123085937). These folks spoke about strange ideas and were quite paranoid. The Tianguis Cultural del Chopo is an open-air market that, during the end of the 1990s and the beginning of the 2000s,

catered to the subcultural youth. In this place there were always free concerts by indie rock bands. The Tianguis del Chopo was founded by Ángeles Mastretta, the director of the museum known as Museo Universitario del Chopo. She is the aunt of Daniel Mastretta. (Please see Appendix C to know the history of the Museo del Chopo.)

Mariana also attended poetry readings. She publicly read her own poems in goth poetry slam events held in Café Bizarro de Coyoacán (19.35110699107247, -99.1630214316024). Goth poetry is about darkness, vampires, horror, death, sadness, or depression. Mariana and I compared all the subcultural philosophies of Mexico City with the dogmas of Emilio the Sage. From that time onwards, my most usual jurisprudential interpretations regarding the laws of Emilio the Sage were deeply influenced by my conversations with Mariana in that ICQ online chat.

Mariana, the cousin of Héctor Jaramillo from Mexico City, is the daughter of Alejandro and María. She was born on Friday the 10th of May 1985 during the reign of President Miguel de la Madrid. The Sun then dwelt in the constellation known as Aries, the golden ram (*Ovis aries*) sent by Nephele, Goddess of the clouds. The Moon was together with planet Jupiter, the almighty God of the Heavens, in the constellation known as Capricornus, the Suhur-mash-ha, the holy beast of God Enki that is half fish (*Carasobarbus luteus*) and half goat (*Capra hircus*). (To find out why this information does not agree with the signs of the zodiac of astrology, please see Appendix B.)

I believe the holy fish of God Enki is a carp that is known by biologists as the Mesopotamian himri (*Carasobarbus luteus*). I will state why. During one of my individual pilgrimages when I was already an adult man, not a long time ago, I went to Mesopotamia. I was in Urfa, Turkey, not far from the biblical Haran, the place where in "Genesis" God YHWH (Allah) contacted prophet Abraham, the legendary founder of the Abrahamic religions. In Urfa there is a mosque dedicated to prophet Abraham that has many holy carps living there. They are Mesopotamian himris. The tradition of keeping holy fish in temples comes from the ancient Mesopotamian temples of Enki; afterward in Hellenistic times, this tradition continued in the temples of mermaid Goddess Atargatis and nowadays only in the Urfa Mosque.

When I was 15 years old, I thought that Mariana was a girl with an exceptionally exciting life. She was enrolled in a state-funded high school that did not charge any student fees, the Escuela Nacional Preparatoria 7 Ezequiel Chávez. This school is in Merced Balbuena, Venustiano Carranza (19.418736911283574, -99.126878789350059). That high school is not far from the hugely dangerous Barrio de la Merced that is infamous for its crime. In

that school, student brawls using bladed weapons were common. Drug dealers attempting to evade police officers were also common there. Mariana was involved in all such thrilling events.

The fact that she had so many friends that belonged to subcultures (known in Latin America as urban tribes) was exciting. These subcultures were comprised of young people that dressed in special costumes according to their affiliation. I was impressed by such fancy dresses that they wore in their daily life. When Yamir wanted to convince me to become a goth, I did not care about youth subcultures or their fashion, but Mariana changed my mind and now I admired the people that spent all their time wearing costumes. Despite this, when Héctor Jaramillo, the cousin of Mariana, requested me to join him to become a goth, I did not accept. I did not accept becoming a goth because according to Emilio the Sage, there was nothing more important than individuality. In this he followed Nietzsche. If I would adopt a popular fashion such as wearing goth attire, I would be like the masses and not a true individual.

Emilio the Sage wanted that I would become an Übermensch above most people. The difference between the ideas of Emilio the Sage and Nietzsche's ideas was that for Emilio the Sage, the Übermensch was the mystical philosopher with supernatural powers. Emilio the Sage believed in such Übermensch because according to him, Nietzsche's Übermensch was an impossibility in real life. In that sense, the Übermensch of Emilio the Sage was more Neoplatonic than Nietzschean. Emilio the Sage did dress like the goths and some of his views came from goth subculture. Nevertheless, I wanted to go beyond Emilio the Sage and the goths when looking for my individuality. Emilio the Sage even learned his fascination for individuals that were different from the rest of society from goth subculture. Such fascination was inspired by the heroes in Lord Byron's writings.

Mariana believed that the subcultures of Mexico City would create a cultural shift that would change all Mexican society by substituting all mainstream fashions and aesthetic tastes for their own. She thought she was one of the pioneers of that future Mexico that she dreamed. Due to her subcultural affiliations, Mariana often wore the sexy and showy outfits worn by ravers, especially the ones worn by the psytrance subculture. She also had a piercing in her nose and another one in her navel. In 2000 in Mexico, only alternative girls had piercings in parts of their body other than their earlobes. She often dressed in her daily life wearing clothes that were small and that did not cover very much of her body. She was always scantily clad, so she showed off a lot of her body skin. Thus, she looked like the sexy girls from video games and comic books. She built her brand by devising her looks, fashion, and personality imitating the

superheroines drawn with the "bad girl" art style of the comic books of the 1990s.

During that decade, there were plenty of bad girls in comics and video games because antiheroes were fashionable. Mariana showed off a lot of her body even when she dressed up as a goth to go to read poetry in Café Bizarro de Coyoacán. During poetry slams, she was a hot goth. Such outfits suited her a lot, because her body was slim and toned, as the bodies of the fictitious girls she imitated. Thanks to her outfits, she always showed off her bare innie belly button and the scar that she got after her appendicectomy. An appendicectomy is a surgical procedure that involves extracting the vermiform appendix of a patient when the appendix suffers from an infection caused by bacteria such as *Bacteroides fragilis*, *Klebsiella pneumoniae*, and *Escherichia coli*. I admired Mariana a lot due to her physical appearance. She was in fact very popular among my male classmates. Many of them admired her because she smoked tobacco (*Nicotiana tabacum*) cigarettes using a long cigarette holder to look like a femme fatale. Others admired her because she claimed to have taken all recreational drugs that were either illegal or controlled. She said that she even once injected herself with heroin, a highly dangerous drug that is obtained from the opium poppy (*Papaver somniferum*). Gilberto Villeda, the friend of Daniel Huerta, did not admire her. He simply said, "Poor Mariana, she is a drug addict gal..."

It can seem inconsistent that I admired Mariana who was a drug addict, and that at the same time I hated the diabolical school administrators that pressured students to take drugs. The reason was that I admired Mariana for her physical appearance and for her adventures, not because she was a drug addict. Moreover, on one side, it was possible to discuss with her about recreational drugs rationally. On the other side, the evil school administrators imposed recreational drugs by using their authority to influence students.

Mariana was very obsessed with the hippie belief that altered states of consciousness are essential for religious and spiritual practices. They are obviously not essential, because average people that go to church to listen to the holy mass and that neither meditate nor take drugs also practice spirituality. There have been also other paths toward spirituality, such as practicing charity among the destitute; living according to strict ethical values; or by means of remembrance meals for families or large communities. Despite this, the use of entheogens was indeed important for ancient religions. This happened with the use of waterlilies (*Nymphaea caerulea*) in Pharaonic Egypt; the use of the plant known as *Ephedra procera* in Zoroastrianism; and the use of the fungus known as *Claviceps purpurea* in ancient

Greece (that is the source of the Eleusinian kykeon). Also, in modern times in Catholicism, people use wine, an alcoholic drink made of grapes (*Vitis vinifera*) and fermented with *Saccharomyces cerevisiae*.

In general, altered states of consciousness were indeed important within mysticism and supernatural transhumanism, but they are not only achieved using entheogens. All drugs have potential side effects. Furthermore, in "Septem Defensiones," Paracelsus (1538) said: "What is there that is not poison? All things are poison, and nothing is without poison. Solely the dose determines that a thing is not a poison." It is easy to suffer from an overdose. In addition to these issues, many entheogens generate addictions that can harm the health of their users; hence, it is better to avoid the use of drugs with religious aims and substitute them with safer methods. Moreover, that is consistent with the commandment of Emilio the Sage that states that we must live life virtuously. The use of addictive drugs may lead to addiction. There is nothing farther away from virtue than addictions, for they do not allow individuals to live with temperance.

Thus, we need to avoid them, no matter the cost. Yet, all holy plants and fungi are worthy of our worship, and we need to honor them because of the properties that they have. They are suitable symbols to refer to the practice of religion by means of altered states of consciousness, even if they are not used in such rituals. I agree that it is indeed possible to attain divinity through consuming the molecules of the plants and fungi that possess holiness, but that it might also be a harmful path for one's health. The great divine power of the saintly plants and fungi can also be destructive.

Mariana traveled to Huautla de Jiménez, Oaxaca to take hallucinogenic mushrooms that belong to the genus *Psilocybe* to have mystical experiences. Enríquez's path shows us that mystical experiences can be attained without the need of narcotics. I do believe that it is a safer and better path toward divinity. *Psilocybe* fungi were used by Indigenous healers from the mountains in secret religious Catholic rituals where the clergy were not involved. These vigils known as veladas had healing and oracular aims to solve the problems of the patients. María Sabina, an Indigenous healer from Oaxaca, sold her knowledge to American and Mexican hippies in exchange for cash.

The hippies did not want to use the mushrooms to look for healing from illnesses or to solve their problems. They just wanted to have fun by having psychedelic experiences. In this way they desacralized the fungi. Their sinful secularization was the result of following the teachings of their hippie spiritual guru Timothy Leary, who claimed that psychedelic tripping was essential to obtain spiritual states of consciousness. Since then, the *Psilocybe* mushrooms were obtained

through cultural appropriation by hippies and drug addicts as a recreational drug. (To listen to María Sabina, the woman who betrayed her cultural inheritance by selling magic mushrooms to hippies, please listen to her Catholic music in "Mushroom Ceremony of the Mazatec Indians of Mexico" (1957).)

Regarding the possibility of acquiring miraculous powers preached by Emilio the Sage, I had already achieved some results. Martín, one of the physical education teachers, organized a running event known as "carrera atlética" every year. This took place in the park known as Viveros de Coyoacán. Ignacio was very tired after running in the "carrera atlética." As I had the reputation of being a mage or a holy man, he asked me to please give to him the same well-being and absence of fatigue that he had before running. I hypnotized him and in just 10 seconds, he already felt strong enough to start playing soccer/football. He was totally revitalized. Such a hypnosis session was not like the ones performed by Enríquez.

Enríquez worked in the following way: He would ask us to close our eyes; then that we would breathe deeply while we were relaxed; then he started talking, telling us the hypnotic script to bring a change in our lives. The results were obvious only after many hypnotic sessions many days later. The kind of hypnosis that I used while helping Ignacio was totally different. I did not ask him to close his eyes, nor did I ask him to breathe deeply. I did not ask him to relax or say any words. I only touched him with my right hand over his shoulder. The hypnosis lasted 10 seconds and the result was immediate.

A man named Vicente Fox became the new president of Mexico. He was a member of the political party known as Partido Acción Nacional (PAN). It was the first time in 71 years that a politician that was not a candidate of Partido Revolucionario Institucional (PRI) became president of Mexico. Now I shall outline how the downfall of PRI happened. The economic crisis that started in 1994 and that is known as Error de Diciembre or Efecto Tequila triggered it. Citizens attributed their financial problems to the corruption of President Salinas de Gortari and his political party, PRI. The assassination of presidential candidate Luis Donaldo Colosio decreased the voters' trust in PRI. Mexicans were unhappy about their government. That is why President Ernesto Zedillo attempted to distract people with the chupacabras urban legend. Most people did not trust the left either. The left at that time consisted of two different political groups with different ideologies. On the one hand was Subcommander Marcos and his Ejército Zapatista de Liberación Nacional (EZLN). On the other hand, was Partido de la Revolución Democrática (PRD) that Sergio, the principal of the school that I

attended, loved so much. None of these options were loved by most Mexican voters, who massively voted for the conservative Catholic far-right. That is how PAN became the most powerful political party in 2000. After Vicente Fox became president, democracy truly developed in Mexico.

It sounds very good in theory. But in real life, strangely, it did not make Mexico a better place to live in. It changed for the worse. Great misfortunes happened in the coming years. PRI in its 71 years in power was able to pacify Mexico after the Mexican Revolution war. It was able to keep almost everyone disarmed. Crime was also quite scarce during these decades. Since 2001, organized crime began ruling Mexico. At the beginning, it did not have absolute control of the country. Criminals did not become rulers overnight as soon as PAN became the most important political party. It was a gradual empowerment. In the beginning, criminals started to bribe politicians to freely commit crimes unobstructed by police officers. Afterward there were politicians that were secret members of organized criminal syndicates. Finally, years later, to be able to hold office, all politicians had to be members of criminal organizations, no matter whether they belong to left-wing or right-wing political parties. The left and the right became the same. In this final stage of moral decay, it was common that politicians sent assassins to kill other politicians at all levels of government.

As criminal organizations ended up governing Mexico, there were more thieves, kidnappers, murderers, and drug traffickers in the streets. Cops stopped helping average citizens, as they behaved as the members of organized crime. Since that time up to the publication of this book (2025), the Mexican government continues to be controlled by organized crime. Since 2018, both the left and the right support criminal organizations more than in the past and govern in an authoritarian fashion with the same shared agenda. They also have literally brainwashed all Mexicans using media outlets, so they believe in the most nefarious political ideologies and economic theories that exist. For example, misandry is now allowed. This brainwashing was performed using the techniques invented by psychologist Gustave le Bon (1895) described in “Psychologie des Foules.” I believe this autocratic form of government is God YHWH’s punishment to Mexicans for all their sins since 2001. The current government of Mexico is demonic. Even with all his faults, Ernesto Zedillo was the last good president of Mexico.

In the same way that Machiavelli (1531) in his book titled “Discorsi Sopra la Prima Deca di Tito Livio” considered that there were five good emperors of ancient Rome, I consider that there were 12 good presidents of Mexico. This is the list of the 12 good

presidents of Mexico: Guadalupe Victoria, Vicente Guerrero, Juan Álvarez, Benito Juárez, Sebastián Lerdo de Tejada, Manuel Ávila, Miguel Alemán, Adolfo Ruiz, Adolfo López, Miguel de la Madrid, Carlos Salinas, and Ernesto Zedillo.

The schoolteacher who taught logic, ethics, and philosophy was Mr. Robert. Emilio the Sage showed me that philosophy was a life path toward virtue and wisdom. On the other side, Mr. Robert did not agree with that. He was not a true philosopher. His logic classes were limited to reading the book by Fernando Savater (1999) known as "Las Preguntas de la Vida." We had to underline in the book whatever would be asked in the exam so we could memorize it. The answers to exam questions were limited to writing down the exact sentences or paragraphs from the book by Savater without modifying them. We were not allowed to analyze what was written in that book or why the author wrote down such ideas. If we wrote a word with a spelling mistake, or if we wrote a synonym of it, or if we wrote the concept in our own words, Mr. Robert always marked it as a wrong answer. We were required to learn Savater's words by heart and write down whatever he said without questioning him or genuinely trying to understand what he meant.

When he was our ethics teacher, it was the same but with a different book. This time, the book was "Ética para Amador" by Fernando Savater (1991). Once, Mr. Robert gave us photocopies of an essay so we could read it in class. I was happy because at last, we would read a different author from the one who wrote the textbooks. I felt extremely frustrated when I noticed that the essay was written by Fernando Savater, the same author as always...

Fortunately, Mr. Robert did not teach me philosophy classes, as I studied the so-called Área II (Biological & Health Sciences). We did not have any classes of such a subject. However, I am sure that philosophy as taught by Mr. Robert also entailed reading Savater. I did not like Savater's ideas. He was a proficient demagogue that never questioned the dogmas held by society. Mr. Robert was quite good, however, at speaking about illegal recreational drugs. He used to spend all his classes saying that life was very bad. He literally said that life was shit and that it sucked (sic). He claimed that the only way to escape all life's ills was by taking narcotics that would numb us to all our problems, and he frequently told us his experiences every time he took recreational drugs. Therefore, some of my classmates such as El Chacho nicknamed him "Mr. Drugert." Mr. Robert liked removing garbage from school rubbish bins to paste it on white canvases. In that way it was possible to display the trash as if it were an artistic shadow box. Headmaster Sergio said that he was an artist and hung his litter collages on the walls of the school. It was a fact that his artworks were just junk.

Saldaña, the disciple of Emilio the Sage, was one of the most well-read persons that I had ever known. Only my uncle Jorge Reyes Mejía read more books than him. Saldaña did not read about science or technology. He only read poetry, literary fiction, and essays. He once told me something strange and marvelous. He said that there were plenty of feral dwarf people living in the *Quercus* forests in the north of Cuernavaca. They only appeared at night. He said they were called the tepeites, after El Tepeite. El Tepeite is the southeastern slope of Cerro el Caballete, a dormant volcano that is found to the south of the lakes known as Lagunas de Zempoala. Saldaña was not joking—he truly believed in feral dwarves. He claimed they sometimes visited the house gardens in the suburbs of Cuernavaca.

When I was about to turn 16 years old, I asked my father to please give me a car as a birthday present. I did not ask him to give me any random car. I asked him to please give me his Dodge Intrepid 1998, the luxury car that he bought for Nora. He decided to keep it with him after he found Nora having sex with another man. My father agreed and I got that car. Having that car was like having a victory trophy. I felt that my mother and I finally defeated Nora. I felt victorious because my father was again with us during all his free time. However, my mother and I did not truly defeat Nora, she just made a stupid mistake. Maybe our success was achieved by patiently resisting until Nora did something stupid.

I started driving my car as soon as I turned 16. While driving my new car, I frequently went with my classmates to the punk rock concerts of Jetro's friends. Jetro was the best friend of Emilio the Sage. These concerts were in Multiforo Cultural Alicia (19.42158387771363, -99.15420706489301). This was a cultural center for youth subcultures and indie music. (To listen to the music played by the band of Jetro's friends, please listen to the song "Calcetas" by 301 Izquierda (2000).) Nowadays the Foro Alicia is not located in Colonia Roma anymore. It is now in Santa María la Ribera. I also went with my friends by car to all the parties in the houses of my classmates during the nighttime. (To listen to the kind of music played at such parties, please listen to the song "OV7 – Enloquéceme" (2000).) As now I drove my own car, I did not need to bother my mother anymore to pick me up from my friends' houses. Gilberto Villeda nicknamed my car Punk-O-Car after the punk rock compilation albums "Punk-O-Rama" (1994, 1996, 1998, 1999, & 2000). He decided to christen it like that because my ICQ nickname was 100% Punk and because I always listened to punk music through the car audio when I was driving it. (To listen to the kind of music that I played through the car audio, please watch "blink-182 - All the

Small Things (Official Music Video)" (2000).)

Héctor Jaramillo, who finally did not become a goth, invited me to play a tabletop role-playing game (RPG) known as "Dungeons & Dragons" (third edition, 2000). I started to visit him every Sunday to play with him, with his brother Carlos Jaramillo, with Arévalo, with Gerardo Iñiguez, and with the siblings Leonardo Soria and Diana Soria. At the beginning, Arévalo was the gamemaster, that in "Dungeons & Dragons" (D&D) is known as the dungeon master. He was the dungeon master because he had more experience playing this game than any of us. Later, Héctor Jaramillo became the dungeon master. I think that the game quality decayed after this because he was not as good as Arévalo. Sometimes when we played together, Andreas visited us and played the game with us.

Nevertheless, I did not like when he attended, because he smoked too much tobacco (*Nicotiana tabacum*). Our D&D campaign was set in a medieval-like preindustrial world full of very weird creatures. It was a world like the ones described in the novels by Tolkien and C. S. Lewis. All action happened within our imagination, but we of course played our characters in front of the other players. The game was violent, as every issue was solved by fighting. Diana Soria had the best characters, as they were a fairy and a female dragon. The campaign was about an evil king that was the main antagonist. He sent us on special missions to fight in otherworldly places hoping that we would die on each mission. To devise the king's personality, Héctor Jaramillo was inspired by Caligula, as he is depicted in the novel by William Howard (1979) titled "Gore Vidal's Caligula." Héctor Jaramillo was extremely obsessed with that novel. Thus, the king of Héctor Jaramillo's stories was a sexual pervert and Héctor Jaramillo's campaign was full of sexual perversions.

In a way, playing D&D is cool because one imagines almost everything. Unfortunately, the dice and the rules did not allow us to have as much creativity as I and my classmates had during elementary school when we played during recess time while running all over the school yard. I can remember our stories were equally enjoyable without the need for any dice, rulebooks, or anything that you purchase using money. Not even a dungeon master was needed. As there were no rules, our fantasy universes could be even more original.

Héctor Jaramillo loved the video game "Final Fantasy VIII" (1999). His waifu was Rinoa Heartilly. He also loved reading the comic book known as "El Libro Vaquero" and the manga "Cardcaptor Sakura." Carlos, the brother of Héctor Jaramillo, suffered from coulrophobia. He was immensely afraid of clowns. Every time he saw someone dressed up as a clown he ran

away as quickly as possible in the opposite direction and did not want to approach that person. Clowns are indeed chilling and scary. That is why some goths, who loved horror, wore clown makeup on their faces. Clowns in fiction are psychopathic killers. My friends who played D&D and I always went together to comic book conventions.

On Monday the 15th of January 2001, a new encyclopedia known as "Wikipedia" was launched. It is the largest encyclopedia. At the beginning, it was obviously not as big as now. An encyclopedia is a set of articles on almost every topic. The first encyclopedia was the "Encyclopédie, ou dictionnaire raisonné des sciences, des arts et des métiers." It was published in the 18th century to reflect Enlightenment values, so it was heavily politically slanted. Later encyclopedias were based on this one. However, not all of them are as slanted. When I was a child, my parents bought for me a traditional encyclopedia known as "Microsoft Encarta" (1993). I loved that it included plenty of bird song recordings. Eventually, traditional encyclopedias were outcompeted by "Wikipedia."

During Easter holidays, I went with my parents to watch wild birds to Tamaulipas, Mexico. I went to El Chorrito, Jaumave, Presa Vicente Guerrero, Soto la Marina, La Pesca, and El Cielo. On the outskirts of Gómez Farías, I saw a jay that was almost identical to a normal immature *Cyanocorax morio*. Nonetheless, this individual had an orange bill instead of a yellow one. When I saw it, I thought that it was a new species not known to science. The most splendid bird species that I saw during my birding trip to Tamaulipas were the crested guan (*Penelope purpurascens*), the singing quail (*Dactylortyx thoracicus*), the black skimmer (*Rynchops niger*), the eastern screech-owl (*Megascops asio*), the elegant trogon (*Trogon elegans*), the blue-capped motmot (*Momotus coeruliceps*), and the Tamaulipas crow (*Corvus imparatus*).

During the time I was in Tamaulipas I did not use ICQ. As a result of this, Mariana sent me a greeting card where she wrote that she missed me, and that it was great that we met and that we were good friends.

Having Punk-O-Car, I was curious about how it felt accelerating enough to reach its top speed. One day, I decided to go to Tehuacán-Cuicatlán by car with my friend El Zambo to test its legendary extremely high speed. My father always boasted about how fast Punk-O-Car was, so I wanted to try that. While I was driving the car, El Zambo and I spent all day listening to rock music songs in Spanish. (To listen to one such song, please listen to "Tornasol" by La Gusana Ciega (2000).) I drove Punk-O-Car and El Zambo was in the seat to my right. We left Mexico City. We crossed the mountain pass between Mount Telapón, and the volcanoes known as the Most Holy Iztaccíhuatl. After this, we crossed Puebla de los Ángeles, and from there we went to

Cuacnopalan. From there we went to Tehuacán. We kept going until reaching the northernmost part of the State of Oaxaca.

On the part of the highway between Amozoc and Cuacnopalan, I accelerated the car until it reached its maximum speed. When we were not far from Tepelmeme, Oaxaca, we stopped at a lookout in front of a majestic canyon carved by the Calapa River. This canyon was populated by cacti (*Cephalocereus columna-trajani*). This landscape was so breathtaking that it looked as if it was an oil painting. Close to Cuacnopalan, Puebla there is a junction between two highways. When I was returning to Mexico City, I accidentally hit a wheel of the car on a sidewalk by the highway in the Cuacnopalan Junction. El Zambo and I stopped at a filling station to check if the car was damaged. It seemed okay. We returned to Mexico City.

Unfortunately, my mother discovered the signs left by the sidewalk impact on the wheel. She also discovered the paper receipts of the payments that we made at the toll plazas. My mother rebuked me for going so far away from Mexico City on a highway. She bullied me during the following months for that. I was totally fed up with her verbal abuse that made me feel miserable. She did this for at least two years until I stopped living in Mexico City and seeing her.

Rodrigo Ávila noticed that Ignacio and I played Pokémon all the time. He wanted to know who was better, so he asked us to please play against each other in a Pokémon battle. We agreed and set the rules. The rules were that all our Pokémon were to be level 100, and that we would not include legendary Pokémon in our teams. I would fight using my "Pokémon Gold Version" (1999) and Ignacio would fight using his "Pokémon Silver Version" (1999). During a whole month, we were training arduously. Diana Soria, the sister of Leonardo Soria, lent me her "Pokémon Red Version" (1996). The reason was that the only Generation I game that I had was "Pokémon Yellow Version" (1998). I needed one of the previous versions because the glitch used for duplicating items would be very useful to obtain the best possible Pokémon team. On the day of the duel, plenty of my schoolmates surrounded Ignacio and me to watch the clash. The combat lasted longer than expected.

Therefore, during the battle, schoolteacher Madame Rodón entered the classroom to start the lesson. Ignacio suddenly decided to stop the battle to be able to attend the class. There was no winner. There was no loser. I did not like Ignacio's decision. I think he was not a good Pokémon trainer. A good Pokémon trainer would skip classes to play.

Jurisprudence

Let us think about Elizabeth Bennet. She is a fictitious character from the novel "Pride and Prejudice" (1813). This fictitious young woman was never imagined before Jane Austen thought about her. She was invented by Austen. In idealism, as it was preached by Emilio the Sage, Elizabeth would exist. The reason for this, as it was formulated by pre-Socratic philosopher Parmenides, is that ideas are "something." Therefore, they are not what we refer as "nothing." "Nothing" is defined as not being "something." Hence, they have the property of existence. The fact that they are ideas implies that they are "something" and therefore exist. This can be read in Parmenides's poem "On Nature."

Emilio the Sage believed in the modal multiverse suggested by philosopher David Lewis (1986) in his book titled "On the Plurality of Worlds." In this hypothesis, all possibilities exist in real life in other universes. Therefore, according to this view, nothing fictitious is genuinely non-existent. However, the views of Emilio the Sage were not identical to those of Lewis. Emilio the Sage did not believe in the metaphysical hypocrisy known as contextualism. This is an idea of Lewis that states that metaphysical hypotheses should be restricted to academic settings such as university classrooms and philosophy journals. Contextualists forget about all their metaphysical hypotheses in their daily life and behave accordingly with the official hegemonic metaphysics of astrophysical cosmology.

This is hypocritical and fraud. It is hypocritical because not even the author of a hypothesis believes in that thesis. It is a fraud because it is not the philosophy of real life; if it was, they would of course live their daily lives according to it. Nevertheless, the philosophers that suggest it do charge real money for investigating it. Emilio the Sage taught me that when we devise or believe in alternative metaphysical theories to the official one, we must be ready to modify our behavior according to such metaphysical theories. This is taking our faith to its logical conclusion. According to idealism, any of our fantasies do exist as an idea. Given that, they do exist. In the case of the supernatural powers of my life list of birds, they were believed by Mariana to exist.

Therefore, they are true and exist. Such a list truly has miraculous powers, even if it only happens within the idea. In case such divine powers are not reflected in this reality, this would confine such occult powers only to another possible modal universe where it indeed possesses supernatural powers. Strangely, by a psychological mechanism known as the self-fulfilling prophecy, believing that a life list of birds has miraculous powers does make it miraculous in this modal universe that we inhabit. The reason is that if one believes that increasing the number of sightings of lifers in a life list improves us, then one starts to truly

improve one's life when more sightings are added. This is because of psychological mechanisms that happen because of our zealous faith in an idea. By this mechanism, the ideas that exist as realities in another modal world can have effects in this modal world where we exist.

This is not the same as the chaos magic suggested by Austin Spare (1913) in "The Book of Pleasure (Self-Love): psychology of ecstasy." The reason is that I do not want to say that by only believing in the power of the life list, changes happen in the natural universe that we inhabit. The changes do not happen outside of the human mind. The changes are simply modifications in the attitudes we have in our daily lives due to the way faith modifies our moral values. This is of course not the only mechanism by which magic happens, as magic is not just a single metaphysical object. Magic is a conglomerate of different phenomena that are very diverse and quite distinct that we cannot fully understand. The greatest flaw of all theoretical Western mages has been trying to explain the whole of magic under a single paradigm when magic is a plurality, not a singularity.

Mariana thought that illegal recreational drugs were the gates to access a supernatural power that was feared by people with economic or political power. On the other side, I thought that recreational drugs were a tool that people with economic or political power used to idiotize and control citizens. Surprisingly, these opposite conclusions were based on the same suppressed premise.

The suppressed premise is that whatever is approved by the powerful is bad and that whatever is banned by the powerful is good. What led Mariana and me to reach startingly opposite conclusions were the totally different social environments that we inhabited. That is why Emilio the Sage claimed that our society is the source of our worldview. The same premise led Mariana and I to see the same situation as opposite only because of living in different societies. Mariana's society was a state-funded high school that did not charge any student fees, and my society was a private high school that charged student fees. Peculiarly, both societies coexisted within the same city. Therefore, a political ideology or a religious doctrine cannot be understood in their practical and normative applications by only reading them. We need to know the society where they are going to be applied. In practice, the very same idea can have surprisingly opposite effects in accordance with the society where it is to be applied. This is also relevant regarding magic, as magic would be something different in accordance with the society that would practice it. Could it be that different cultural interpretations of magic would produce differences in the efficiency of magic?

According to Emilio the Sage, there was a strong symbiosis between demons and the

most powerful human beings. Demons commanded the most powerful humans on how to control society and, in exchange for fulfilling their wishes, the demons awarded them with success, glory, and riches. Hence, someone truly good had to live in perpetual rebellion and resistance against the hegemony of the people in power. Mariana found this myth especially appealing—she passionately hated her parents. That is why she rebelled against them and against all their moral principles. Her initial rebellion also led to her rebellion against her schoolteachers and all their moral principles because she thought that they also oppressed her. A worldview where people in power are evil and demonic is very useful for someone such as Mariana, who lived in perpetual resistance because it legitimized her rebellion.

A great part of the ICQ online chat with Mariana involved her reading to me the poems that she wrote. Poetry is extremely important because it can provide meanings that prose cannot. Prose is very logical, but not as emotive as poetry. Mariana's poems were able to make me feel emotions that Mariana intended that I would feel. So, a great part of Mariana's online chat was an emotional experience and not just a logical conversation. Moreover, Mariana's poetry was also able to allow that the reader would experience the mysteries of spirituality and the mysteries of the human mind that cannot be understood through logical reasoning or empiricism. Logic and empiricism can indeed describe how a human mind works.

Nevertheless, they cannot properly describe the symbolic contents of such a mind. By that, I mean the meaning of all the possible cognitions of such a mind. Some cognitions are totally irrational, they are utter madness! Poetry is by far superior to understanding these parts of the mind! The poetry that is beautiful but logically incomprehensible is by itself very similar to magic. It is like the ancient magical spells employed to modify the universe and the human mind. Poetry allows us to experience sacredness and hence also the supernatural, as prophet Orpheus thought in antiquity.

CHAPTER 12. *CUTIBACTERIUM ACNES*

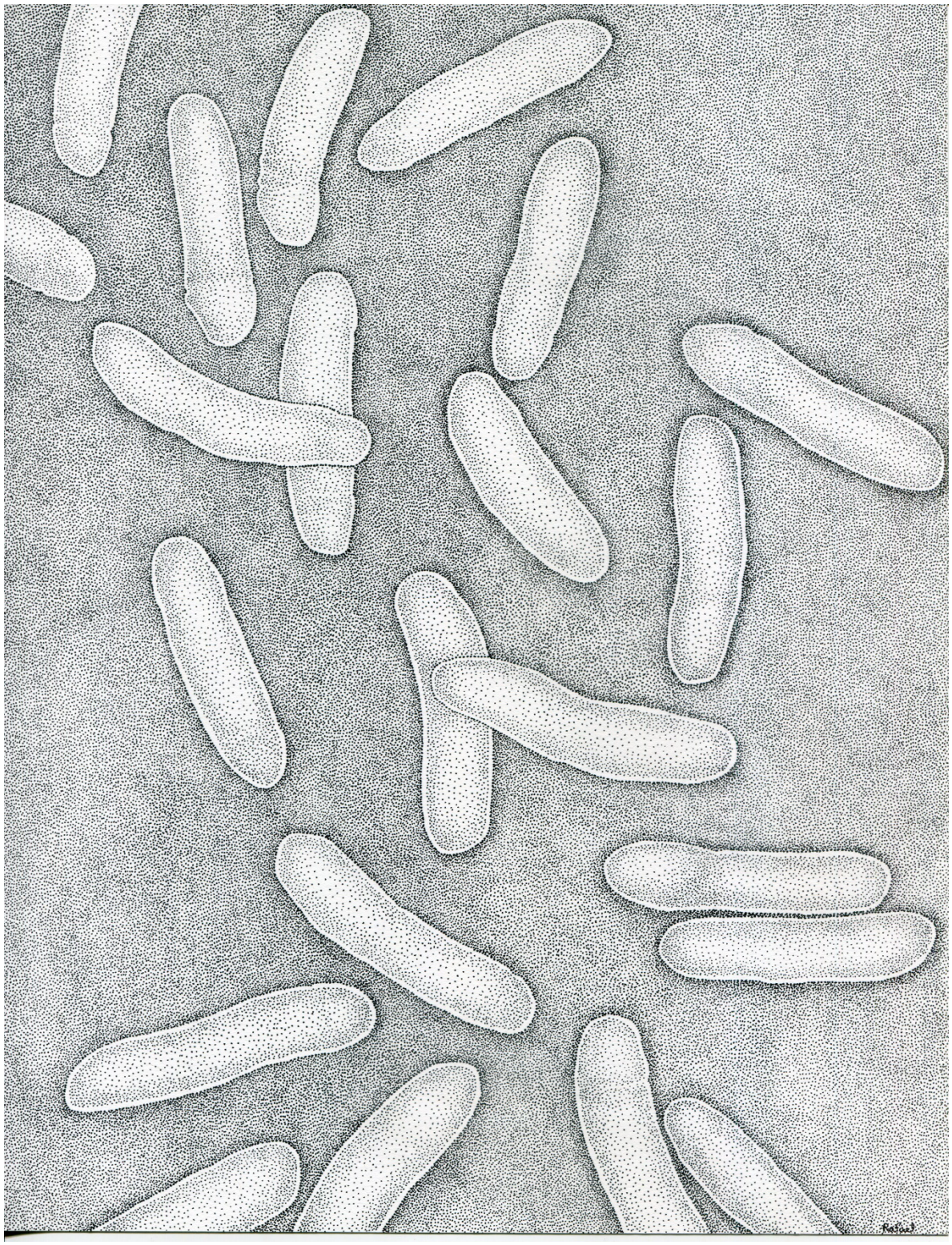
During the summer of 2001, Mariana failed tenth grade. Alejandro, her father, wanted her to no longer be distracted by using the Internet. Moreover, he considered that the Internet was too expensive and that it was useless for him, so he decided to cancel the dial-up Internet service. That is how my ICQ online chat with Mariana ended.

At that time, I suffered from acne on my face, so I went to see Dr. Olga Labastida, a dermatologist who diminished it with creams and antibiotics. As the antibiotic was quite effective, I think the acne was caused by bacteria that belonged to the species *Cutibacterium acnes*.

During the summer holidays, I went birding with my parents to Cozumel Island. In the San Gervasio archeological site, I was able to watch the Cozumel thrasher (*Toxostoma guttatum*). This was an endemic bird species of the island. I was one of the last persons who saw it, as a few years later, it became extinct. It was registered for the last time three years after I saw it. Days later during the same holidays, I watched for the first time a northern potoo (*Nyctibius jamaicensis*) not far from Espita, Yucatán. We were impressed by its utterly ghostly appearance!

On Tuesday the 11th of September 2001, there were terrorist attacks with airplanes in the United States of America. They were against the Twin Towers of the World Trade Center in New York and against the Pentagon in Washington, the District of Columbia. Another airplane crashed in Somerset County, Pennsylvania. Diana Soria cried that day because of all the misfortunes that would follow these grisly events. Andreas immediately rejoiced at the terrorist attacks because he hated American people. Gerardo Iñiguez started to tell jokes to mock the events that happened that day. The inhumane students who were happy about the terrorist attacks were obviously heavily brainwashed by the political ideology taught by the school administrators. Such ideology was anachronic and useless, as the school administrators thought as if the Cold War would never have finished.

The Islamic terrorist organization al-Qaeda that was led by Osama bin Laden claimed to have orchestrated the attacks. Therefore, George Walker Bush, the president of the United States of America at the time, ordered his hosts to attack Afghanistan because the terrorists were protected by the Taliban, the political group that governed the country. Bin Laden claimed that he ordered the attacks because the United States of America had soldiers stationed in Saudi Arabia since the time of the Persian



***Cutibacterium acnes* (Gilchrist, 1900) (Propionibacteriales: Propionibacteriaceae)**

Illustration made by Rafael Calderón. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 858.**

Gulf War to be able to attack Iraq in case there was another war. Years before, Islamic jihadists in Afghanistan were allies of the United States of America in their fight against the Union of Soviet Socialist Republics, so many Americans created conspiracy theories regarding the involvement of the American government in planning the attacks. The world changed after that event. All airports developed security measures that violated the rights of the passengers. People started to live with constant paranoia. Islamophobia became ubiquitous. The racism against Arabs and brown-skinned people increased throughout the world. Those were violent times...

Preparations for the Internet café continued. We bought the machines that Daniel Huerta selected. We bought them with my mother's money. Afterward, Daniel Huerta and his family had an inauguration party of the Internet café with Gilberto Villeda, the loyal friend of Huerta. We were not invited to that party. Days later, Huerta's father angrily asked my mother that 75% of the money obtained in the business would be Huerta's, no less than that. The reason why he asked for that amount was that according to him, his son was our business partner, not our employee. My mother told him that all the computers and the commercial property were hers. She added that Huerta did not contribute any money for the business. Hence, Huerta did not deserve to obtain as much money from the business. As a result of that dissension, Huerta and Villeda left the partnership. In that way, my mother fulfilled her plan of breaking up my friendship with Huerta and Villeda. She disliked them because they just wanted my money. My mother continued her business by herself.

My mother had begun attending psychotherapy with a therapist named Estela Durán. She was attending therapy since my father broke up his romantic relationship with Nora. Estela Durán was also Arévalo's therapist. In the psychotherapy, the therapist developed my mother's self-esteem by using hypnosis. Furthermore, my mother supposedly learned how not to take revenge against me for the way my father cheated on her with Nora.

She stopped randomly verbally abusing me without any reason. Unfortunately, she kept abusing me. The difference was that according to her, this time she had reasons to emotionally harm me. She had a grudge and extreme hatred against me for simple mistakes that most teenagers of my time made. One such mistake was my expedition to Tehuacán-Cuicatlán with El Zambo. The other mistake was a misfortune that she triggered because she provided all the money so I could pursue the doomed partnership with Huerta. In that supposedly fair way, my mother kept taking revenge on me for the misdeeds of my father and Nora. Now

she was even worse than before because her psychological torture increased more than in any previous year.

During the Day of the Dead 2001 holidays, I went birding with my parents from Oaxaca City to Tuxtepec, Oaxaca. On the highway, I saw amazing wild birds such as an ornate hawk-eagle (*Spizaetus ornatus*) in the mountains and a keel-billed toucan (*Ramphastos sulfuratus*) in the lowlands. At that time, the forests were totally pristine and wild! They were still as when naturalist Ferdinand Deppe explored them in the 19th century!

On Monday the 12th of November 2001, the Yugoslav Wars of Europe ended. As a result of these conflicts, Yugoslavia disappeared, being split into six different countries. These countries were Slovenia; Croatia; Bosnia & Herzegovina; Montenegro; Serbia; and North Macedonia. These wars also were responsible for a horrendous genocide of Muslims.

During the holidays of the anniversary of the Mexican Revolution, I went to Chiapas with my parents. In the archeological site of Yaxchilan, I saw a tree that belonged to the species *Brosimum alicastrum* that was identical to the art installation of the museum in Mexico City known as Papalote Museo del Niño. In fact, it had almost the same animal species, but the animals in Yaxchilan were not sculptures, they were real wild animals!

During such holidays, I went on a day trip that entailed walking the whole day from Lacanjá Chansayab to a Maya archeological site in a hidden place in the middle of the tropical rainforest of the Montes Azules Biosphere Reserve. Unfortunately, to reach the archeological site, one needed to cross the Lacanjá River and there was no bridge to cross it. I removed my shoes and socks to cross it. After crossing it, I put on my socks and shoes again when my feet were completely wet. As a result of this mistake, I suffered from an infection known as athlete's foot, caused by a fungus known as *Trichophyton rubrum*.

The wild animals of this trip that I liked the most were a gigantic bat known as *Vampyrum spectrum* and the king vulture (*Sarcoramphus papa*). The tourist guide who was with us wore the Lacandon folk costume as all the people from Lacanjá Chansayab. This outfit looked a bit like the uniform of the pope of the Catholic Church. The modern Lacandon folk costume does not look like the one used at Lacanjá Chansayab in 2001, as people now wear short sleeves. To see the old folk costume, please see the mural "The Mayas" by Raúl Anguiano (1999) in the Bowers Museum, Santa Ana, California, United States of America.

Saldaña, the pupil of Emilio the Sage, practiced some kinds of dance routines by himself. He claimed such choreographies were very ancient, older than the time when

the Spanish conquistadors invaded what is now Mexico. He said ancient Mesoamerican people invented them to train shamans, that initiates who danced them correctly became a shaman. I do not think they were from pre-Columbian Mesoamerica. They were very different from the folk dances of Indigenous Mexicans. If they were truly that ancient, they would resemble in some way the non-Christian dances of Mexicans who spoke languages other than Spanish.

My Christmas holidays were excellent. Birding made me go to places that were remote and exciting! First, I traveled with my parents by airplane from Mexico City to Hermosillo, Sonora. From there, I went by airplane to Guerrero Negro, Baja California Sur, and from there to Cedros Island, Baja California. From Cedros Island I went by boat over four hours to the open sea until reaching the Islas San Benito, Baja California. From there, I returned to Cedros Island on another four-hour sailing adventure. The waves of the open sea were extremely big. Many times, the boat was by far below the top of the enormous waves! The Islas San Benito are a group of isolated islands in the middle of the ocean. On the islands, there are colonies of northern elephant seals (*Mirounga angustirostris*). During the navigation to reach the islands and on the islands themselves, I watched California sea lions (*Zalophus californianus*), Guadalupe fur seals (*Arctocephalus townsendi*), harbor seals (*Phoca vitulina*), common dolphins (*Delphinus delphis*), South Polar skuas (*Stercorarius maccormicki*), murrelets, auklets, Laysan albatrosses (*Phoebastria immutabilis*), storm-petrels, Cook's petrels (*Pterodroma cookii*), and shearwaters.

Once back home, I observed again how the issue of recreational drugs is that they have side effects that are harmful to health. That is why, since the beginning of the 20th century, the government of Mexican President Venustiano Carranza enacted paternalistic laws that banned them. Such bans do not allow average lawful entrepreneurs to sell them. Therefore, they are sold by organized criminals. Drug trafficking leads to violence between gang members and law enforcers. That is because police officers and the army want to avoid law-breaking behaviors. As very few drug cartels have control over these illegal products, they fight against each other to supply important markets. This also generates more violence. All the violence that occurs in clashes between drug traffickers and law enforcers eventually harms innocent civilians. A greater problem is that the ban of certain recreational drugs benefits corrupt politicians and law enforcers. Through bribery or by leading criminal syndicates, they end up having the de facto monopoly over narcotics. The hippie mindset was very useful for mafia bosses, as it brainwashed young people to buy illegal substances. With the money

obtained from such purchases, the violent industry of illegal drugs kept killing people using firearms.

The drug problem in my school was that all the members of the school were involved in one way or another in illegal recreational drugs, except for the younger children of the lower grades that were not yet convinced of taking illegal substances. Legal recreational drugs such as ethanol (C_2H_6O) and tobacco (*Nicotiana tabacum*) were of course harmful for the human body, but their consumption did not generate as much gang violence.

Andreas was becoming an alcoholic. He spent a lot of time drinking pulque. Pulque is an alcoholic beverage made of *Agave salmiana*. It is fermented using microorganisms belonging to the genera *Lactobacillus*, *Agrilactobacillus*, *Lacticaseibacillus*, *Leuconostoc*, *Lactiplantibacillus*, *Secundilactobacillus*, *Levilactobacillus*, *Fructilactobacillus*, *Lentilactobacillus*, *Zymomonas*, *Acetobacter*, *Gluconobacter*, and *Saccharomyces*. Andreas spent more time with new friends. His new friends were our classmates that suffered from more severe drug addiction. This gang was not only engaged in taking narcotics. They sold illegal drugs as well. Moreover, plenty of drug addicts used to visit him in his house. They were friends of Martín, one of the physical education teachers. These persons went to Andreas's house to take cocaine, a stimulant alkaloid extracted from the coca plant (*Erythroxylum novogranatense* or *Erythroxylum coca*).

Now I will describe the way criminals were able to recruit new members in the school I was attending. The bait used by criminals was the narcotics. Initially illegal substances were free for new prospective clients. Later they were sold at affordable prices. When buyers started to develop addiction, the drug dealers increased the price of their products. If the consumers did not have enough cash to purchase the narcotics, then the drug dealers told them to sell illegal drugs, and they would pay their services with the drugs instead of money. In the school I attended, money from several places was concentrated, as the small gangs of drug dealers that learned their business in the school sold drugs in several schools and neighborhoods of Mexico City.

I stopped visiting Andreas's house. I decided to spend more time with Ignacio and Rodrigo Ávila. Unfortunately, Rodrigo became a shoplifter. He sold all the stuff that he stole to have enough money to buy illegal drugs. He always wanted Ignacio and I to go with him and help steal products as his accomplices. We of course refused every time he requested such. Suddenly most of my friends were either criminals or drug addicts. When they arrived in seventh grade to this school, they were innocent children and ended up being consumers of illegal substances. The evil school administrators were responsible for this monstrosity by

promoting narcotics and openly allowing people to take them...

Among Andreas's friends, there was a classmate whose surname was Olavarría. As Iván, he also believed in animal rights. However, he was ahead of Iván in his commitment to such ideology because he was vegan. Andreas and all his friends who took illegal drugs and were drug dealers went vegan to avoid animal cruelty. I thought they were hypocrites. It was inconsistent that they wanted to avoid cruelty against non-human animals and at the same time they supported financially and as employees the drug cartels. Mexican drug cartels extorted lawful citizens.

Moreover, to fight against other gangs to control the illegal drug market, they had gory gunfights where plenty of innocent people were killed. These organized criminals were also slave traders who sold people to Americans. Some Americans illegally buy slaves to force them to become prostitutes or to oblige them to work as unpaid laborers. Human beings are animals. Supporting drug cartels promotes cruelty against an animal species—the human species. Thus, the drug dealers of the school who were ethical vegans and supported animal rights were hypocrites. They were supporting cruelty against human animals. That is animal cruelty.

I am not in favor of non-human animal rights, non-human animal welfare, or non-human animal liberation. I only wanted to show that my drug dealer classmates were hypocrites. I do not believe we ought to respect non-human species. I did not believe that in 2002 either. My reason for not believing in animal rights at that time was that I knew that to protect ecosystems, people need to get rid of harmful introduced species of animals such as Amazon sailfin catfish (*Pterygoplichthys pardalis*) and brown rats (*Rattus norvegicus*). Protecting and respecting such animal species would only cause environmental destruction.

I started to worry because, as all my classmates were brainwashed to become drug addicts, I knew that I would soon also be tempted. When seeing that my temperance and virtue were going to be tested, I decided to look for persons that would have Verónica Jiménez's telephone number. I required speaking to her to finally defeat all my fears and thus acquire all the spiritual power that I needed to face temptation, but no one had her telephone number.

However, I found someone who had the telephone number of Mario Bernal, who was her classmate since elementary school. I talked to him. He did not have her telephone number either, but he gave me the telephone number of Alma. He said Alma would have the telephone number of Verónica Jiménez because they were good

friends. I called Alma and she told me the telephone number of Verónica Jiménez.

On the night of Friday the 1st of February 2002, I already had acquired her phone number. As always, I felt afraid of talking to her. It was an uneasy situation, so I decided to go out of my house to walk a bit in the garden and the garage. While I was there, I had a mystical experience that showed me that it was the right time and that I should be brave. The mystical experience transformed that telephone call into a sacred mission. I immediately called her and told her all the feelings that I once felt for her and about all my new insecurities. I also told her how talking to her meant my freedom. In that way, my soul was unattached to such phobia, and it slowly grew powerful. I was mighty enough to face temptation. Verónica did not think that what I said was important or relevant. Maybe she was just a laconic person because after confessing the love that I once felt for her, she only said, "I do not know what to say." When I reported my achievement to Emilio the Sage, he said, "I do not like Verónica. How can someone to whom love is declared just say, 'I do not know what to say'?"

Verónica's answer was not important for me. What was important for me was to be free from such fear and to have the power to face the sinister cult of the school administrators. My sacred stoicism that I displayed while declaring my past love was the end of the three lost years of my life. After my "sacred stoicism," I modified my prayers to God YHWH (Allah) forever. I think that after the sacred stoicism, I finally had total conviction and trust in the teachings of Emilio the Sage. That is why my prayers to the Deity stopped mentioning fears that I did not have thanks to my sage spiritual master.

Our science laboratory schoolteacher was an arrogant and despotic man named Omar Zamora. One day, he asked us to work on a biology project that we would plan by ourselves. We would work in groups of two students. He never marked that work, so he made us work in vain. My project was going birding with Ignacio to photograph birds at the nature reserve known as Parque Ecológico de Xochimilco. We were able to photograph 22 different species!

At that time, I had a great knowledge of taxonomy and systematics of different groups of organisms. I had access to several sources to obtain such knowledge. I learned some of this from the books that my uncle Jorge Reyes Mejía bought for me. I also had several books that my father bought for me at an annual book fair known as Feria Internacional del Libro Infantil y Juvenil. Furthermore, not all my knowledge was based on books; I also learned a lot by visiting every Sunday the natural history museum known as Museo de Historia Natural de la Ciudad de México. My frequent visits to this museum were of course before my father started having sex

with Nora. (To know more about this natural history museum, please read Appendix C.) My knowledge of systematics and biodiversity was so vast that I even had more knowledge in such fields than any of the biology teachers at my school. Therefore, Madame Rodón, my first biology teacher, stopped teaching about taxonomy and systematics. Instead of teaching that, every time she needed to teach that topic, she asked me to please teach the subject to her seventh-grade students. I instructed them every year since I was in eighth grade.

Afterward, Mr. Robles, the student discipline coordinator and geography teacher, also requested me to teach about ecosystems to his students. Isabel, another biology teacher, also asked me to please teach some of the classes to her students. I was the only student at the school who taught classes to other students. I became extremely popular in all the school classrooms. I was the most popular student at the school. By the time I was studying the last grades of high school, I became troublesome for the school administrators. All the other students of the class of 1996–2002 took recreational drugs, except Ignacio and me. As I was extremely popular among the middle school students, the school administrators considered that I was an undesirable person, as I showed that it was possible to be popular and a cool guy without taking recreational drugs. Regardless, Mr. Robles, who was one of the school administrators, asked me to still teach some classes, as he was very lazy.

Adriana was the high school coordinator and counselor. She made an appointment to speak to me, in which she asked me to please grow up. According to her, I was very childish. For her, growing up meant drinking ethanol and smoking tobacco (*Nicotiana tabacum*). Smoking pot (*Cannabis sativa*) would be the next step toward maturity. I replied that I was loyal to the principles of Emilio the Sage that made me live a virtuous life and question the most deep-rooted social norms. Thus, I would not behave unvirtuously. She told me that not everything in life is black and white, that there was a broad grayscale that was very interesting and that I should rather aspire to that. Adriana thought that all the teachings of Emilio the Sage were mere childish fantasies, nothing more than kids' chit-chat. Therefore, I needed to grow out of it.

She believed that taking recreational drugs meant maturity because she was addicted to the nicotine ($C_{10}H_{14}N_2$) of tobacco as she smoked a lot. I valued fantasy a lot because Emilio the Sage believed the products of fantasy truly exist. He did this because he was an idealist that followed the example of holy men and philosophers such as Parmenides, St. Anselm, and Immanuel Kant. In the version of idealism of Emilio the Sage, the fact that a concept is intelligible and can be understood

immediately provides existence to that conceptual object. Thus, fantasy was something that, according to him, had the property of existence. Hence, fantasy was not something that we should take lightly. I told Emilio the Sage about my conversation with Adriana, and he told me that he would perform miracles to help me face any temptation.

During that time, I went out to watch birds with Mariana, the cousin of Héctor Jaramillo, in Parque Ecológico de Xochimilco. After that outing, I started to spend more time with her in person. She often called me by telephone at my house looking for me. My mother was quite worried about that. Firstly, because she thought that Mariana's voice was identical to Nora's. She thought that this woman was Nora, who was trying to befriend me to take revenge on my father for breaking up with her. I told my mother who she was and that she was not Nora. Then my mother told me, "Is she the Mariana that triggered the feud between the brothers Eduardo Santos and Alejandro Santos?" I answered yes because she indeed did so. The laws of Emilio the Sage required that I tell the truth. My mother then told me that it was the same as if she was Nora because both were drug addicts and behaved even worse than full-service sex workers. My mother was rather paranoid about Nora. I was furious with my aunt Luisa when I found out that she secretly listened to my telephone conversations with Mariana using the upstairs telephone. My mother said that she was thankful for Luisa's reprehensible behavior. She supported her bad actions because she claimed that Mariana was like Nora...

I went with my parents to the Sótano del Barro, a gigantic pit cave in Santa María de los Cocos, Querétaro. I went to watch the wild colony of military macaws (*Ara militaris*) that live there. That place is awesome because the diameter of the entrance of the shaft cave is so broad that, inside the cave, there is a small forest! The forest outside the vertical cave is a temperate *Quercus* forest. On the other hand, the forest inside the cave that is found many meters below the entrance is a tropical forest. Further down, the cave becomes too dark, and nothing can be seen below. Obviously, this cave is a microhabitat. The atmosphere is composed of gases. The lower we are, the more gas molecules are found above our heads. As we go downwards, the air pressure increases. Gay-Lussac's Law states that pressure is directly proportional to temperature, so the temperature also increases. Mountains have fewer molecules above them than the seaside. Therefore, sierras are always colder than beaches, if and only if they are at the same latitude. I hypothesize that is the reason why the extremely deep pit cave has a tropical climate down inside of it and a temperate

climate above the entrance on the Earth's surface.

Yamir used to claim that the school administrators were members of a diabolical cult. He was right. I knew that everything he said was truth when Adriana, the high school coordinator, told me that they indeed practiced rites. Iván used to claim that the school administrators had a secret object that they valued a lot inside the secret passage. He was also right. Adriana told me that they worshipped this inanimate thing. She believed that the object that they venerated was able to think and to communicate with them. According to her, the evil object stated that "it felt that I was taking away its space" (sic). I do not know what Adriana meant by that. Was that a complaint that I was too popular among my schoolmates? Was it a protest because I rejected consuming recreational drugs? At that time, there was an undistinguished schoolmate in the same class as me. He was so ordinary that I cannot remember his legal birth name. Nevertheless, I can remember he was nicknamed "El Barril." Suddenly, overnight, this loser was heavily praised by the school administrators. They did as much as their hegemony allowed them to do to make him popular among my classmates. Adriana and Mr. Robles told me why. El Barril converted to their diabolical religion. Now he was as damnable as the school administrators. Adriana, Mr. Robles, Mr. Molina, and Headmaster Sergio wanted me to befriend him so he could become my new tutor, and I would consider him as my new spiritual teacher. They knew that if he would be able to corrupt me, my popularity would result in the younger students purchasing massive amounts of narcotics themselves. When I reported back to Emilio the Sage about the cult of the school administrators, he said that they were mentally ill, that they were crazy.

During the 2002 Easter holidays, I went by train from Chihuahua City, Chihuahua to Los Mochis, Sinaloa. One week before traveling, I went to see Dr. Octavio Martínez Natera because I suffered from a bacterial gastroenteritis caused by *Salmonella enterica*. When my mother and I told the physician about our trip, he told us that we should take a helicopter trip. We did that in the Copper Canyon, Chihuahua. Flying by helicopter was marvelous! As that day the wind was too strong, the helicopter could not fly toward the waterfall we were supposed to visit, so it flew in a different direction. We flew over a canyon that was inhabited by plenty of flocks of thick-billed parrots (*Rhynchopsitta pachyrhyncha*). I will never forget that flight! While traveling by train in the Sierra Madre Occidental, I was also able to watch the solitary eagle (*Buteogallus solitarius*) and the Sinaloa martin (*Progne sinaloae*). These birds are very difficult to find in the wilderness as they are scarce. In the lowlands, I watched the western screech-owl (*Megascops*

kennicottii) and the Sinaloa crow (*Corvus sinaloae*).

Adriana said to me that she would show me the heinous object that she worshipped if I would become El Barril's disciple and change according to the agenda of the school administrators. I forthrightly refused her temptation. She then told me that hence I would neither be able to know their idol's secret origin nor what kind of thing it was. I challenged her and told her that I had my own means of knowing such stuff, that I would end up knowing that without becoming their puppet. After saying this, I proudly left her office.

The villainous school administrators rightly considered that I was extremely arrogant. Thus, they wanted to publicly humiliate me. The graduation trip was approaching. This vacation was not part of the curriculum. It was an optional tour where all the students of a class traveled together to a hotel in another city to get drunk. That was a golden opportunity for the school administrators to humiliate me—they planned to compulsorily give ethanol to me until I would get drunk, then give illegal drugs to me. They knew they could manipulate my classmates so they could fulfill this through peer pressure. Eight years before, when I was in fourth grade, I suffered from an illness of the gastrointestinal tract in Daniel Villagrán's school camping trip to Temixco. After that experience, I decided against going on any more school camping trips. Thus, I decided not to go on the graduation trip. It was not the same as a camping trip, as they would spend the night in hotel rooms, not in tents, but it was still similar.

Adriana made an appointment to speak with my mother to request her to send me on the graduation trip. My mother said that she could not do that; given that it was not part of the educational curriculum, I was free to do whatever I wanted to do. Mr. Robles attempted to persuade my aunt Ana Reyes to convince me to go on the graduation trip. Ana Reyes spoke to me, but she did not change my mind. All my other schoolmates of the class of 1996–2002 went to the graduation trip. Ignacio never got drunk or took drugs before, but during the graduation trip, he was manipulated to do that for the first time. I can remember that before the graduation trip, Adriana said the following words in class: "During the graduation trip I will not spend any time protecting penises and vaginas." This meant that she and the other school administrators would not protect the students from sexual violence. That had dire consequences...

During the graduation trip, some classmates were socializing in the hotel swimming pool and close to it. One of these students was a girl named Mónica. She was drunk. As she was very intoxicated, Eduardo Santos humiliated her in public by raping her. Mónica was drunk, but not unconscious, so she noticed everything that happened that day. As a result of the sexual abuse that she

suffered, after that moment, every day during lunchtime, she stopped leaving the classroom. She refrained from going outdoors as most students did. She spent her free time indoors sorrowfully crying. A few of her female friends remained there to comfort her. She never told what happened to people who were not her classmates. She felt a lot of shame for being raped in public. She was not responsible for that, but she felt that she was because she got drunk while wearing only a bikini. Moreover, she felt worthless for being seen having forced sex by many of her classmates. Strangely, most male students praised and congratulated Santos for raping the poor girl. Among such despicable guys were all the hypocritical ethical vegans that were in favor of animal liberation to avoid cruelty against non-human animals.

Since then, all Santos's fans nicknamed him "Violantos." This nickname comes from the Spanish word "violación" that means "rape." Santos felt so proud of his new nickname, as he thought that by raping a girl, he had manfully displayed his manhood. My classmates had changed a lot, and I did not understand them anymore. Not only did Mónica's behavior change after that experience, but Eduardo Santos also changed radically. He started going every day to the gym and taking anabolic-androgenic steroids to become very muscular. If he had a different point of view from that of any other man, no matter the subject, he always solved the disagreement by resorting to fighting with his fists. Every time he thought that a girl or young woman was attractive or moderately attractive, he sexually harassed her offensively. To get ripped, Eduardo Santos started to eat canned tuna (*Katsuwonus pelamis*, *Thunnus albacares*, or *Thunnus obesus*) as a protein source.

I used to meet Mariana in person frequently. We used to spend time together and talk. We did this while we were sitting and slowly moving on the swings of a park known as Parque Acacias, Benito Juárez (19.36435937424321, -99.17366616802329). This park was close to her apartment. One day, we went to a sculpture park known as Paseo de las Esculturas, Coyoacán. On the same day, after that trip, we went to Mount Ajusco to hike. Whenever Mariana went, she performed rituals that she made up by herself. She was somewhat like a New Age priestess. That was because of hippie cultural diffusion. She acquired these traditions by consuming illegal recreational drugs as many of her acquaintances were into hippie spirituality, as it was linked to narcotics. Hippies were drug addicts and spiritual people at the same time. Since that time up to modern times, no one else has taught me so many rituals.

In the sculpture park known as Paseo de las Esculturas, something remarkable happened. We were in the south part of the

park close to the concert hall known as Sala Nezahualcóyotl. That place is also near to the drama college building known as Centro Universitario de Teatro. The landscape in that place is a solidified lava field created by the last eruption of Mount Xitle, a volcano. It is full of short shrubs. There, between the black volcanic rocks of Pedregal de San Ángel, Mariana showed me a solidified lava tube. I was afraid of entering it, but Mariana asked me to follow her inside of it.

When we were inside of the lava tube, we happened to share the same mystical experience. Mariana had not taken any drugs that day. I, of course, also did not take recreational drugs. I do not know if this had to do with the psychological phenomenon that I observed when I hypnotized Ignacio. Apparently, I was able to share my visual hallucination with Mariana without attempting to hypnotize her. It was something spontaneous. I was not consciously planning to have that vision and both of us had it at the same time. Then, I realized that mystical experiences were not only inside my head. Are mystical experiences objective perceptions of reality that can be shared with other people even without telling them about them? Since then, this lava tube became a place for meditation, contemplation, and philosophical reflection.

It was common at that time that I would give Mariana rides from her house to her school in my Punk-O-Car. As Mariana discussed with me the teachings of Emilio the Sage and, at that time, I was reading the full "Bible" and "Qur'an," the route from Mariana's house to her school ended up linked to spirituality, like the lava tube. After taking Mariana from her house to her school, I went to my home, so the sacred route is also found close to my house (please see Appendix D to see the itinerary of the route).

As a result of my daily biblical studies inspired by the religiosity taught by Emilio the Sage, I started to spend time with a classmate that was Jewish named Enrique Bouchot. He attended a synagogue where the rabbi practiced mystical studies of the "Torah" and knew secret practices of Jewish ceremonial magic. The "Torah" is the Law that God YHWH gave to prophet Moses at Mount Sinai. It is part of the "Tanakh." I was really interested in all the mysteries known by Bouchot. I never knew that the "Bible" had such a magical and occultist interpretation. It was more appealing than the interpretation that was taught to my grandmother Lorenza in her church. Therefore, I practiced mysticism rigorously and frequently.

Enrique Bouchot and his friend Arturo López Ducolomb were the wisest and most intelligent students of all the class of 1996–2002. Their general knowledge was extremely wide. However, they were never awarded with the most excellent grades by the schoolteachers that did not even know

10% of what they knew. The reason was that the diabolical school administrators did not consider them as their favorite students. Bouchot knew everything about history. He was a specialist in World War II, so the hero that he admired was Winston Churchill.

That year was the 2002 FIFA World Cup South Korea/Japan, an international soccer/football competition. As always, the evil school administrators canceled classes whenever there were soccer/football matches so we could watch them on the television sets found in every classroom.

Andreas's friends had parties and social gatherings every weekend. In such parties, they drank plenty of alcohol and took illegal drugs. El Zambo went one weekend to such a party, as usual. A friend of his nicknamed El Jiro also attended the party. When they were quite drunk, El Jiro kissed El Zambo in the mouth. They not only kissed each other's lips; they continued until mutually and passionately caressing their tongues. El Zambo was not gay, but he enjoyed the experience. After he stopped being drunk during the following weeks, he was depressed and cried every time he could. That was because in the homophobic society of the time, being gay was considered wrong. El Zambo felt ashamed for what he did because he was heterosexual. I can remember that El Jiro was a peculiar individual. He always carried with him a real long human bone from a dead person. That bone was his amulet—and he also always had with him a bag full of tiny minerals. He claimed that no one else could touch such minerals, because if someone else would touch them, they would lose their power to provide good luck.

My high school education was quite bad. The reason was that I attended a poor-quality school. I will now outline the curriculum of the high school education that was compulsorily taught by order of the government of Mexico in the 2000s. The first school years, all sorts of subjects were taught to students. During the last year, there was a specialized curriculum according to the university degree that the students wanted to study. The specialization that I chose was Biological & Health Sciences.

During the first two years, we were taught trigonometry and basic algebra. We also learned the Greek and Latin etymologies of Spanish language. We learned how to paint using the gouache technique. We learned the history of Mexico. Mr. Robert supposedly taught us logic and ethics. We read "A Piece of Steak" by Jack London (1909); "Cuentos de Amor de Locura y de Muerte" by Horacio Quiroga (1917); "L'Étranger" by Albert Camus (1942); "Under the Volcano" by Malcolm Lowry (1947); "El Laberinto de la Soledad" by Octavio Paz (1950); "Cien Años de Soledad" by Gabriel García (1967); "La Tía Julia y el Escribidor" by Mario Vargas (1977); "Los Rituales del Caos" by Carlos

Monsiváis (1995); and obviously, the boring books by Fernando Savater. The last year, we studied the human body, organic molecules, ecosystems, Newtonian mechanics, and electric circuits. Part of the education involved learning pseudoscientific psychoanalytical Freudian theories as if they were a real science that faithfully describes and predicts human nature.

Jurisprudence

According to Emilio the Sage, one of the virtues of the wise is being brave. In his view, one should not be afraid when one faces dreadful situations. This idea come from an ancient Greek philosopher named Lycurgus. He was the author of the "Constitution of Sparta." According to an old legend, he wrote it thanks to divine inspiration. He was the person behind the excessive militarization of Sparta; therefore, for him, bravery had a foremost importance. His renowned followers, Socrates the Elder and Plato, also believed that the best possible citizen should be a mighty warrior in the battlefields. The successors of Socrates, known as the Stoics, also thought that not being afraid was a virtue that entailed displaying one's masculinity and power to rationally control our emotions. As Emilio the Sage believed in Greek philosophy, he believed that a requirement to be powerful was having the ability to rationally use our free will to fight against our fears that stop us from doing what we want in life. This Stoic attitude in the face of fear was practiced by me when I decided to call Verónica Jiménez. In that way, I mastered my own passions. That is the kind of power that Emilio the Sage aimed for me to acquire.

The mystical experience that I had before practicing the sacred stoicism with Verónica Jiménez demonstrates that I was successful at following the path that Emilio the Sage expected that I would walk. According to Emilio the Sage, the aim of the spiritual path that he showed to me was to contact supernatural forces. The vision of the divine being that inspired me to do what I knew to do helped me to end my fears and to be ready to fight against adversity. Such vision was evidence that I was successful at welcoming supernatural forces in my life. That was the kind of theurgic and Neoplatonic holiness for which Emilio the Sage commanded me to search. That involves returning the plain human being to its previous glorious divine state. This primeval form of divinity is what in Abrahamic religions is understood as the spiritual state of Adam in the Garden of Eden. In the Graeco-Roman Olympian religion, this was the spiritual state of humans during the Golden Age, when God Saturn reigned over the Earth.

The school administrators benefited from introducing young students to recreational

drugs, and this is why they influenced everyone to take them. By following the spiritual path that Emilio the Sage showed me, I was seen as an obstacle by the school administrators because I abstained from it. In the Gnostic mythology of Emilio the Sage, when a human starts to get free from the chains that demons impose since the time of birth, the demons start to obstruct that mystic. The actions that they would do to accomplish their mission would be mind-controlling the people that surround the initiate so that such people would tempt the initiate to abandon the spiritual path. The school administrators tempted me to abandon the teachings of Emilio the Sage. They did this either by trying to persuade me or by using social control tactics. As a believer of the dogmas of Emilio the Sage, I thought such attempts to change me were temptations that came from the demon princes themselves. According to me at that time, the school administrators were mere puppets of the demons, as most human beings.

Mariana considered that in this Universe, there are places with more occult and supernatural power than others. Sometimes that happens because certain events happened in such a place. These events involved using great amounts of magic or necromancy, so a lot of such magic or necromancy was spilled all over the place. Thus, such magic or necromancy became impregnated in the solid or liquid surfaces of such place. In other situations, according to her, what happens is that such places are already magical per se. That happens because of the position that they occupy in the Universe or because of the substances from which they are made.

For Mariana, there are materials that have a greater propensity to develop divine powers than others. According to Mariana, magical places have certain peculiarities. In such places it is easier to perform spells, and they are more effective. When the faithful pray in such places to the Deities, the Deities listen more and answer their prayers more. The magical place better protects the organisms that dwell in that place than other places. Therefore, it is more difficult to hex them when they are in magical places. Meditation and all spiritual exercises are more fruitful in such places. Mariana thought that the solidified lava tube that she showed me was that sort of site, and this is why she said we both had the same mutual mystical experience. I do not know if what Mariana said regarding magical places was true. What is indeed true is that after entering the lava cave, I started to experience shared mystical experiences with plenty of persons that never happened before that day.

According to Emilio the Sage, being a philosopher means following a path. If we consider the metaphor of the path, the path between Mariana's house and her school was a perfect symbol for the philosophical path. What happened was that this route

became something like Mariana's online chat because I spoke with Mariana about philosophy while I gave her rides from her house to her school. Metaphorically, it is the philosopher's path preached by Emilio the Sage.

Plenty of the students that were studying high school in Mexico during the 2000s thought that the educational quality was extremely low. I was among such people. Plenty of criticisms were derived from those against the government of Mexico. Young people that belonged to subcultures thought that their philosophy was superior to the stupidities taught by the government in its official school curriculum. Mariana claimed that the philosophy that could be learned by studying esoteric and occult ideas meant for initiates was by far superior and more relevant than the shit that she was being taught at school, and she did not believe in even a single idea of the official curriculum. She simply believed all such nonsense was false. She thought our educators were lying. I do not entirely agree with her. I simply think that the curriculum was made up of half-truths, and indeed a few lies...

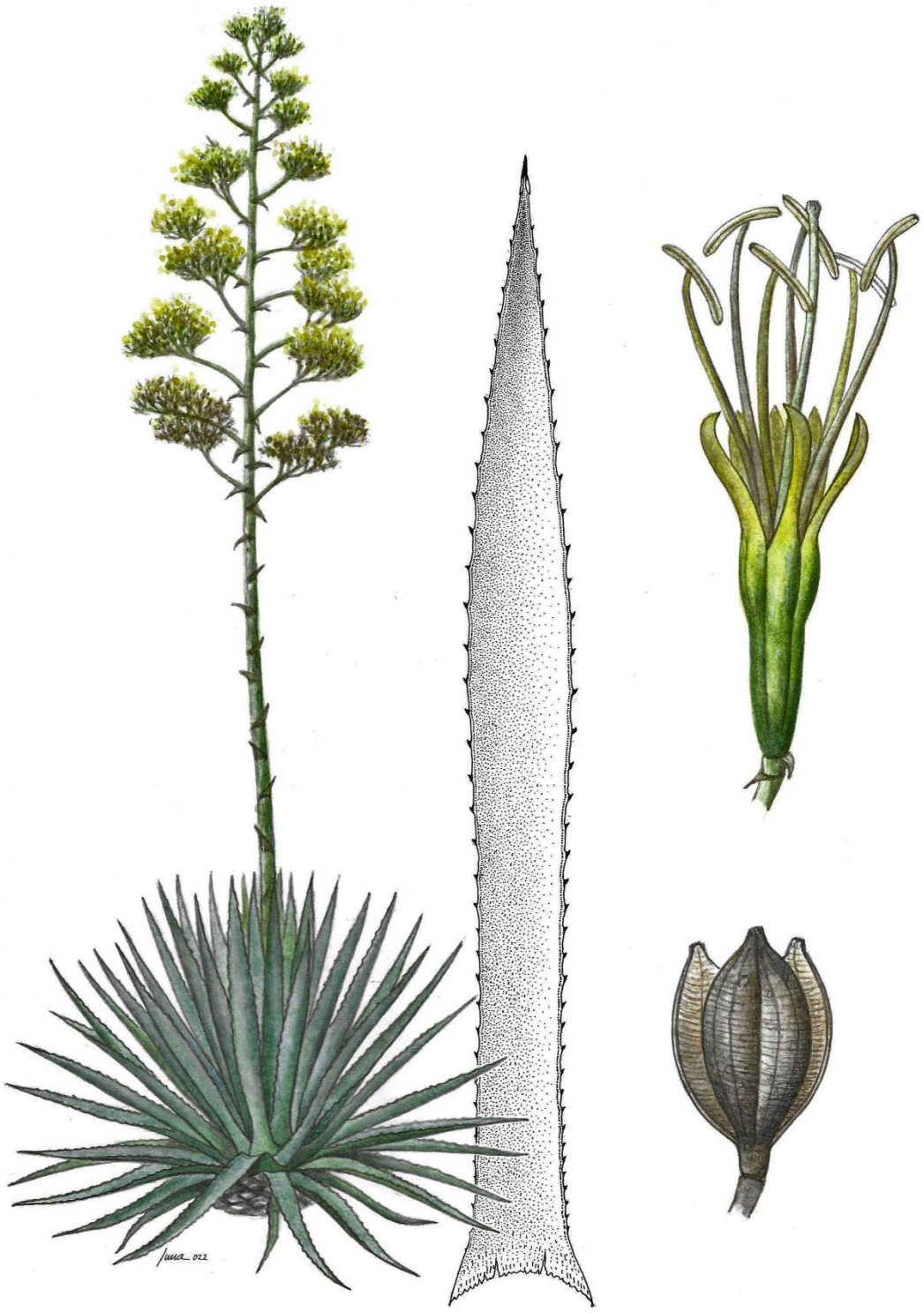
Regarding the half-truths, I believe that the lack of information was almost as if they were telling lies to us. With the scant knowledge that they provided, it was impossible to understand nature, science, and human society. The main problem was that even the education authorities that issued such curricula were astonishingly ignorant. A clear example of this was that they prescribed us to learn psychoanalytical pseudoscience instead of learning modern psychological science. In this case, Mariana was right: official education told lies to us. It was not that the Mexican education authorities that issued the curricula were immoral. They were simply extremely uneducated but with enough political power to impose their ignorance as education throughout the whole country.

CHAPTER 13. *AGAVE TEQUILANA*

The graduation party for the students and the school administrators would be held in María Villarreal's house in Colonia Portales. María Villarreal was one of my classmates. (If you want to listen to the sort of music played during the party, please watch "Jeans - Corazón confidente (Video Oficial HD)" (2001).) Mr. Molina was the middle school coordinator, a member of the diabolical cult. In the graduation party during the dark hours of the night, I approached him and greeted him. I asked him whether he liked to drink tequila. I knew that he would agree to drink it because he loved drinking ethanol (C_2H_6O). Tequila is an alcoholic drink made of *Agave tequilana* and fermented with *Saccharomyces cerevisiae*. I gave Mr. Molina a cup of tequila while we were talking about trivial, everyday stuff. After he finished drinking the cup of tequila, I offered him another cup. He accepted it and kept drinking. Later, I filled a cup with tequila and gave it to Mr. Molina without asking if he wanted it. I did not ask him this time to ensure he would not reject it. He dutifully drank it.

When he was a little bit drunk (and it was evident from listening to his voice that he was intoxicated), I asked him to please tell me the secret of the object that they worshipped in the secret passage of the school. He told me that it was a quartz (SiO_2) crystal formed underground below a mountain in Mexico. He told me it was a gift that was given to Headmaster Sergio by their sinister, dark, and evil spiritual teacher. That demon-possessed spiritual teacher was the man that Iván nicknamed as the "Pirate Captain." However, Iván was wrong regarding some of the features of that man because his treasure was not a chest full of gold coins, he was not a seaman, and he did not live ages ago. Mr. Molina told me that they worshipped this mineral crystal because, according to him, it was alive and was conscious and talked to them. They believed that planet Earth was alive and therefore everything that emanated from it was as well. He told me that all rocks and minerals that came from the Earth were alive in the same way as all the trees that grew from the Earth's surface.

I then asked him whether a meteorite that looks more like an average rock than a tree was alive. He told me it was not, because it did not come from the Earth. Hence, it did not share part of the Earth's logos. As a result of their ridiculous diabolical teachings, the school administrators thought that a rock that comes out from a volcanic eruption is more like a plant than a meteorite. In that way, I fulfilled the challenge that I swore to Adriana I would achieve. Even against the authorization of



***Agave tequilana* Weber, 1902 (Asparagales: Asparagaceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 859.**

the school administrators, I was able to know the school secret that they so zealously kept. I was able to do this without accepting their narcotics. It is not difficult to imagine that, having taken recreational drugs, the school administrators hallucinated that a mineral crystal spoke to them. As a result of Mr. Molina's testimony, I knew that some of Iván's claims were true. The metal door in front of Headmaster Sergio's desk in his office that looked like the entrance to a small room to store archives was, in fact, the entrance to the part of the secret passage where the mineral crystal that he venerated was found.

Ancient philosopher Aristotle said in his treatise on "Metaphysics" that "many things have a plurality of parts and are not merely a complete aggregate but instead some kind of a whole beyond its parts." He was right. Thinking that the whole has the same attributes as its parts is known as the fallacy of composition. Thinking that the parts of a whole share the same attributes that the whole has is known as the fallacy of division. Both logical fallacies are deficient ways of thinking. As an example, it is like claiming that because Enríquez's hair is black, therefore Enríquez is necessarily a Black man. This is obviously false because his skin color is not black. The idea that "due to the fact that the biosphere is alive, then the whole planet Earth is alive" is an instance of the fallacy of composition. Even though this is indeed a fallacy, let us suppose for the sake of argument that it is true that the whole planet Earth is alive. By concluding that, hence, a small part of planet Earth such as a single mineral crystal is alive, we are committing the fallacy of division, as in the example of Enríquez's color. It is likely that the school administrators learned logic by taking Mr. Roberts's classes. That would explain why they never learned to reason rightly.

The principal Sergio suffered from two addictions. He was addicted to alcohol and cocaine. His addictions were linked to each other. After having drunk plenty of alcohol, he would treat the unpleasant side effects by snorting cocaine. Cocaine is an illegal alkaloid that is obtained from *Erythroxylum novogranatense* or *Erythroxylum coca*. I was not able to quite understand the school administrators. Adriana claimed that Headmaster Sergio had a lot of spiritual power. Supposing that it was true, why was he a slave to his addictions? Was the spiritual power of the school administrators not enough to provide them with a happy life that was free from addictions? I do not know if Headmaster Sergio envied me for not being a drug addict; perhaps he merely hated me because I did not buy illegal drugs. Or maybe he was aware that I tricked Mr. Molina to obtain all their secrets.

But something was indeed a fact: During the graduation party in María Villarreal's house, he was angry with me. That very night, he challenged me in front of the

whole class of 1996–2002. He challenged me because all the other students had already drunk tequila, but I had not done so yet. He publicly said to me, "Drink tequila, Peregrinus! Show me that you are man enough to drink!" I arrogantly replied, "I am not going to drink because I have decided not to do that." Headmaster Sergio hoped that all my classmates would then help him to convince me to drink tequila through peer pressure. However, none of my classmates said anything. All of them were extremely shocked to see the principal openly challenging me and that I was not submissively accepting his request.

Then Headmaster Sergio said to me again, "Why are you not drinking? Do not be girly! Come on, show me that you are a true man!" I answered him, "I am indeed a man, and even though I am a man, I will not drink." All my classmates were utterly speechless. In that way I defended my individuality and the teachings of Emilio the Sage.

Nowadays the school that I attended between the years 1996 and 2002 is bigger. One of the buildings where people lived, in the avenue found to the east of the school, was damaged by an earthquake. It was the dreadful earthquake that happened on Tuesday the 19th of September 2017. Its epicenter was in Axochiapan, Morelos. The destroyed building was removed, the school bought the land, and a new soccer/football pitch was placed there.

Emilio the Sage asked Saldaña and me to please meet him. We went to Saldaña's house in Colonia Educación. There, Emilio the Sage said to us that all the teachings he gave to us were secret doctrines. He added that if he were to ever write a philosophical text, he would state some ideas there, but never the ideas that he taught to us. He then asked us to choose carefully to whom we would preach such teachings. He also told us that if we ever wanted to write down his teachings, we would need to swear that such a book would be buried under the foundations of buildings that would be used as churches. This was because according to him, the teachings should be accessed by initiates, not by every layfolk. Nonetheless, even if his teachings were openly divulged, most people would not be able to understand them. Most of his secret teachings come off as incomprehensible parables and riddles.

Saldaña was so excited by the philosophy that he learned when he was a cultist and that he developed by himself while studying under Emilio the Sage that he stopped being interested in becoming an actor and instead chose to study a bachelor's degree in philosophy. Eventually, he dropped out of college, because the writing style their professors requested was totally different from the speeches delivered by Emilio the Sage and by him during the years 1999–2002. The presentations of Emilio the Sage and Saldaña were full of vitality and magic!

Every time Saldaña attempted to write exciting essays, his professors marked his homework with low grades. This obviously demotivated him. His professors loved dull texts. Not strangely, one of the members of the staff at his university who influenced everyone there with his boring way of writing was Fernando Savater!

Moreover, at Universidad Complutense de Madrid, formal logic was very important to get a bachelor's degree in philosophy. This means stating arguments using a mathematical backbone of logical statements. Variables are simply substituted by words. Saldaña was never able to master logic. I think his university was wrong for trying to teach logic without teaching any mathematical courses as a background. A good logician needs to be good at arithmetic, then good at algebra. Then the person who wants to be a logician needs to study trigonometry and to attempt to perform proofs of trigonometric identities. After this, the student needs to learn the methods to prove theorems. Then, and only then, formal logic should be studied. Mathematics is a whole. A subfield in mathematics cannot be studied in isolation. One risk thinking that one is knowledgeable when one is truly ignorant. A philosopher who claims to be good at logic but is not good at other undergraduate mathematical topics related to logic does not truly understand logic. Saldaña is not to blame; his professors should have taught him the whole mathematical undergraduate knowledge required for logic so he could properly understand it. The philosophy department at Universidad Complutense de Madrid teaches logic illogically.

My argument is not a perfectionist fallacy. In mathematics, all bases are required to properly understand topics that use such bases as building blocks. That is how mathematics is taught at university undergraduate programs. Mathematics is not the same as political sciences or literature and should not be studied using such methods. If it is the case that all philosophy departments teach logic in an incomplete manner, then Universidad Complutense de Madrid should act rationally and teach logic differently, not merely following what most do. Indeed, mathematics is essential for philosophy. The most blessed Pythagoras always taught math to his philosophy students. In his dialogue "Republic," Plato says that mathematical knowledge is useful to learn ethics. That is why Neoplatonic sophists who lived at the time of the Roman Empire claimed that the following inscription was written at the entrance of the Platonic Academy of Athens: "Let no one ignorant of geometry enter."

In June 2002, I had already spent one year studying intensive English in the afternoons. I used to attend The Anglo, an English language academy that taught part-time classes. Hirsch recommended this academy

to me because he attended it (19.354831846934932, -99.1568837416938). The Anglo does not have an academy in that place anymore. When I used to go there, it was common that I had long conversations with Hirsch in English instead of Spanish to practice that language. The reason why I was so interested in English was that I wanted to study and live in the United Kingdom. I decided that because the man who created the cloned sheep (*Ovis aries*) Dolly (6LLS) did his work in Great Britain. That man was Ian Wilmut, and I admired him a lot! I wanted to learn biology to learn more about such marvelous science. My aunt Ana Reyes and Headmaster Sergio severely criticized me for wanting to study biology in the United Kingdom and not in Mexico. However, I did not care what they said. I was young, eager for adventures, and eager to travel to lands that were unknown to me.

When Daniel Mastretta said goodbye to me for the last time in our lives, he said, "Farewell Peregrinus, may you have luck in your journeys, if they can be known as that." Mastretta employed the word "journeys" to refer to my mystical experiences. The transitional time of my life between when I grew up in Mexico and my new life in the United Kingdom was known as "the Journey" after Daniel Mastretta's blessing. It was literally a journey, but it was also a journey in the spiritual sense as Mastretta employed the word "journey." That is why a mushroom that belongs to the genus *Psilocybe* was used as its symbol.

I shall explain why I employed this symbol: In the same way that Saldaña and Mariana had psychedelic journeys that were their spiritual initiations; my spiritual initiation was a literal real-life journey without using drugs. My initiation journey was ending my teenage lifestyle in Mexico to start an adult life abroad. Mariana's spiritual initiation with entheogenic mushrooms was in Huautla de Jiménez. Saldaña's initiation was in Tepoztlán, Morelos.

It can seem strange that Saldaña, an apprentice of Emilio the Sage, took hallucinogenic mushrooms. Nevertheless, we should not forget that my opposition to taking recreational drugs was in part because I wanted to oppose the evil school administrators that attempted to oblige us to take them. No one obliged Saldaña to take drugs, so he did not need to protect his individuality by means of opposing the consumption of recreational drugs. Moreover, Saldaña emphasized the commandment of Emilio the Sage that one ought to perceive reality in a different way so we can change our lives. Saldaña understood it literally. Saldaña personally collected the *Psilocybe cubensis* in dung from horses (*Equus caballus*) and cows (*Bos taurus* & *Bos indicus*). Thus, he did not support drug traffickers as Andreas and his friends. Nevertheless, I do not endorse Saldaña's use of *Psilocybe cubensis*, as it can

cause hallucinogen persisting perception disorder. Mariana indeed bought the *Psilocybe caerulescens*, she did not collect them from nature.

The sale of these fungi in Huautla de Jiménez is not controlled by organized criminals. They are sold by local farmers, and such sales are not illegal. However, this does not mean Mariana did not help criminal syndicates—she indeed supported the drug cartels of Mexico City by buying and selling ecstasy (3,4-methylenedioxymethamphetamine), Adderall (dextroamphetamine), LSD (lysergic acid diethylamide), and marijuana (*Cannabis sativa*) at raves. (To listen to the kind of music played at raves, please listen to the song "Infected Mushroom - Bust a Move" (2000).) She was not a disciple of Emilio the Sage, so she sinned as much as Andreas. Despite this, I still paid attention to her because she talked about interesting stuff; she was attractive; she always wore revealing outfits; and she was not a hypocrite. Andreas and his friends were hypocrites.

As Mariana had ties to organized crime, she worshipped Santa Muerte. She had an altar dedicated to Santa Muerte in her bedroom. Santa Muerte (San la Muerte in South America) is depicted as a human skeleton with a scythe. It is a personification of death. This image is based on the "Book of Revelation," because in that biblical text, God YHWH (Allah) gives a scythe to the angel of death. The cult of Santa Muerte started in the 18th century. There is still an old sculpture that was made at that time. It is found in a monastery known as Convento de Santo Domingo de Yanhuitlán, Oaxaca. Catholic clerics reject this cult.

During the last decades of the 20th century, Santa Muerte became the unofficial patron saint of organized criminals. Thus, Santa Muerte was their symbol. In 2001, a church to worship Santa Muerte was inaugurated in Tepito, Cuahutémoc. This became the most important church dedicated to this cult. This church was found 3 km away from Mariana's school.

Mariana was so savage and rebellious that one time, she assaulted her father by attacking him with a syringe while they quarreled. She inserted the needle of the syringe into his skin.

On Monday the 1st of July 2002, I journeyed with my mother by airplane to London, England, United Kingdom. That flight and all my subsequent flights to London were in British Airways planes. A typical flight of British Airways at that time lasted between 10 and 11 hours. It usually left Mexico City at 9:00 PM. The plane increased its flight height while flying over the states of Mexico, Hidalgo, and Veracruz, so passengers had to keep their seatbelts fastened. Then, we were able to unfasten them as soon as the airplane reached the sea. As soon as the plane reached Louisiana, a

three-course dinner was given to the passengers in their own seats, as in all airplanes. After dinner, the lights were switched off so we could sleep.

The airplane usually flew over Louisiana, Mississippi, Tennessee, Kentucky, Ohio, Lake Erie, Ontario, and Quebec. Flying over Quebec was usually the worst part of the flight, and everyone woke up there because of the strong turbulence. We were reminded to fasten our seatbelts even if we were sleeping horizontally. We then flew over the Gulf of St. Lawrence. After flying over Newfoundland, we reached the Atlantic Ocean. Usually after reaching the Atlantic Ocean came the sunrise, while midday happened while flying over the Atlantic. While almost reaching Ireland, passengers were woken up so they could take their breakfast. After flying over the Irish Sea, the plane reached Wales, where we were reminded to fasten our seatbelts for landing. After this, the plane flew over England, where it landed at London Heathrow Airport at around 1:30 PM.

The reason why my mother and I traveled to London was because my mother wanted to teach me how to live in the United Kingdom. She would teach me how to use taxis, buses, trains, and the London underground subway rapid transit. All the species of wild birds that I watched in the United Kingdom were new to me, and that was just a little sample of what I would see afterward when I would explore the rest of the Western Palearctic. I was surprised by the sunset time in England—it was too late! I had never seen the Sun at times when, in Mexico, it is always nighttime!

I was awed by the antiquities kept in the British Museum. What I loved most in the British Museum was the gallery of antiquities from Pharaonic Egypt, the palace of King Ashurnasirpal II, the jewels from ancient Mesoamerica, the art from Classical Greece, and the erotic sculptures from India. I was also amazed by all the stunning exhibitions at the Natural History Museum, London (51.49628725405584, -0.17640617629798738). What I loved the most in the Natural History Museum, London was the skeleton of the Steller's sea cow (*Hydrodamalis gigas*), the fossil skeleton of the non-avian dinosaur known as *Mantellisaurus atherfieldensis*, the skeleton of the moa (*Dinornis robustus*), and the enormous 19th-century glass case full of plenty of different species of hummingbirds whose corpses were preserved with the art of taxidermy. All of them were displayed as if they were perched or flying around tree branches, as if they were alive! During those weeks, my mother and I also looked for information on how to apply to university there. My mother was happy with what she saw and with the country I planned to inhabit.

During "the Journey," my mother and I had a mystical experience. My mother was afraid because she thought that I was a mage. She

asked me to please refrain from showing my powers to other people. What my mother did not know was that they were not superpowers. Apparently, that was just a shared mystical experience like the one I had with Mariana in the cave.

On Friday the 19th of July 2002, there was a fire in one of the factories of the company Nacional de Cobre (Nacobre). It was where my father worked. As a result of this event, the factory eventually closed. My father and all the other employees were fired a few months later because the factory was too ruined to function.

My official high school graduation was on Tuesday the 30th of July 2002. This event happened in the hegemonic university of the Mexican government that is known as Universidad Nacional Autónoma de México (UNAM). This graduation only entailed bureaucrats printing and archiving official documents. There were no ceremonies, and no student was invited to attend it. However, this was the true graduation because it happened on the date displayed in the official documents and that was the day when the government acknowledged that I finished my high school. UNAM granted me the high school certificate because the school that I attended paid a fee for the UNAM franchise that allowed it to teach its curriculum.

On Friday the 2nd of August 2002, Emilio the Sage told me, "This is the end of the teachings of Spiritual Master Emilio. Now you have surpassed me. You already know more than I could have taught you."

I asked him to please bless my Samsung 7-15x35N binoculars that I employed for birding. Such binoculars would journey with me. Emilio the Sage blessed them by placing them on his forehead with his eyes closed and then by opening his eyes while placing them on his chest. These events happened while we were inside Punk-O-Car on the avenue known as Carretera Picacho-Ajusco while we were going southwards in Héroes de Padierna (19.284113549965866, -99.217779213953). That day, Emilio the Sage and I said goodbye to each other. "The Journey" to England would be a great challenge. I would test all the teachings of Emilio the Sage as, since then, I would live alone in a different country. As Emilio the Sage stopped being my spiritual teacher, I was now free from all the rules that he commanded me to follow. I thought that from that time onwards, life would show me the way I would behave. Since then, the route of Mariana was always followed to remember my discipleship path that I followed by living according to the teachings of Emilio, who was a glorious sage. (Please see Appendix D to know the route that symbolizes this path.)

It is obvious that to study a university degree in an English-speaking country, I required a quite advanced ability to speak in English. Therefore, during the brief time I

was in Mexico during late July 2002, I applied for an English language course in an English language academy in Great Britain. The name of the academy was Bell Language School. I applied to this school in the offices of The Anglo, the English language academy in Mexico City that Hirsch recommended to me.

On Friday the 9th of August 2002, I said goodbye to my family in the Benito Juárez International Airport of Mexico City. As soon as I was alone while walking through the airport to the gate, I felt extremely excited about going to live alone abroad. After the transatlantic flight, I arrived at the Heathrow Airport of London. I was stopped in the immigration office of terminal 4 of Heathrow Airport for about an hour (51.45983743517151, -0.44757548013411524). The problem was that the man who arranged "the Journey" in Mexico City should have given to me a letter of invitation issued by Bell Language School. However, he never gave it to me. The immigration officer did allow me to enter the United Kingdom but on the condition that I would show the letter of invitation within a month. That was one of the most traumatic experiences of my life, akin to visiting the museum of the mummies of Guanajuato when I was a child.

As part of the Global War on Terrorism of the American president George Walker Bush, all the nation-states that were members of the North Atlantic Treatise Organization sent armies to Afghanistan so they would help the American soldiers to fight against the Taliban. One such nation-state was the United Kingdom—so the British feared that the Muslims would take revenge on them by performing terrorist attacks against them. The reason why I was stopped for such a long time in the immigration office of Heathrow was because I am brown skinned. The reason is that most people from the countries of Dar al-Islam are brown skinned. Thus, they thought I was an Arab Muslim. According to their racist ideology (that they acquired due to brainwashing by the British government while being trained to become better immigration officers), I was very likely a terrorist. Hence, they searched very carefully through all my luggage and my body to ensure I would not be carrying weapons or explosives.

The racist immigration officers immediately thought that any brown-skinned person was an Islamic Salafist terrorist. I was not even a Muslim! As a result of the Global War on Terrorism, the British government legalized racism. Fortunately, average British citizens were not racists, so they did not practice discrimination against brown-skinned people. That is thanks to the fact that the United Kingdom is a multicultural and multiethnic society. Nevertheless, the British government at that time did as much

as possible to convert average citizens to racism and islamophobia.

I went by car from the airport to a town known as Saffron Walden. In that place was the English language academy (52.01729695217771, 0.24634529690371387). I went to the school with another new student. Her name was Olivia. She was a girl from Morelia, Michoacán.

I was 17 years old when I started living alone in the United Kingdom. That was during the reign of Queen Elizabeth II. Saffron Walden was an extremely tiny town in the middle of the countryside. As there were not many people living there, it was tranquil, so singing birds could always be clearly heard throughout the day. The town's main square was surrounded by utterly old buildings. Close to the main square, there was a medieval church known as St. Mary the Virgin. Not far from the main square, there was also an archeological ruin. It was a medieval castle. That uninhabited castle was named Walden Castle. Most of the houses in this town were not old. Such houses were built with red bricks and had red roof tiles on top of them. Some of them had small gardens that could be seen from the street. These gardens were full of beautiful domestic species of plants with colorful flowers. These plants belonged to several genera such as *Lilium*, *Allium*, *Narcissus*, *Delphinium*, *Eriocapitella*, *Paeonia*, *Viola*, *Rosa*, *Begonia*, *Geranium*, *Fuchsia*, *Alcea*, *Dianthus*, *Hydrangea*, *Phlox*, *Rhododendron*, *Petunia*, *Lavandula*, and *Salvia*.

The principal of the Bell Language School of Saffron Walden was Nick Fairbanks. The symbol of this school was a bell. My first day of classes was on Monday the 12th of August 2002. Despite being found in a tiny town, this school was not boring, as there were plenty of European, Arabic, Chinese, and Latin American students. Every Friday night, there was a party featuring a disc jockey (DJ) and music for dancing. These events took place in a nightclub that was found within the academy and that only was attended by the academy's students, called Winifred Parsons Hall. This place also was a cinema where movies were projected three times a week during the evening. At the time, a Spanish song was very popular, so it was played at all the parties. (To listen to this song, please watch the video of "Aserejé (The Ketchup Song) [Spanish Version] - Las Ketchup" (2002).)

Every Saturday we used to go by bus to London so we would have fun sightseeing in the city. My bedroom was not in the main building. It was in another building known as Butler Hall (52.01662531614303, 0.2487484224845302). It was in the middle of a wide plain with a grassland that was full of wildlife. To reach my bedroom, I had to walk through plenty of gardens; my bedroom had an individual bed, but the bathrooms were shared with other students.

The students were not required to wear any uniform. I can still remember the scent of the floor cleaner used there. As in the novel "À la Recherche du Temps Perdu" by Marcel Proust, every time I smell that substance, I remember my time in Saffron Walden.

The main building was finished in the 19th century. Originally, such property and its gardens were an academy to educate female schoolteachers for elementary school and middle school children. The academy was known as Saffron Walden Training College for Mistresses. There was a commemorative plaque in the main building that stated that this academy for female schoolteachers was founded in 1884. As a result of a new law, it could not work anymore as an academy for elementary school and middle school teachers, so it became an academy for kindergarten schoolteachers. In 1977, it stopped being an academy to train schoolteachers and was instead rented by Frank Bell to establish one of his English language schools for foreign language speakers.

In my English language academy, we could play films on some computers in the library, but there were no televisions in our bedrooms. Since then, I stopped watching television shows. When I was in Mexico, my favorite television shows were "Top Cat," "Janoschs Traumstunde," "Pingu," "Moomin," "Adventures of Sonic the Hedgehog," "Dragon Ball Z," and "Pokémon."

The first three weeks that I spent at Bell Language School were not as happy as they should have been. I was very worried about the immigration office problem. One day, the principal finally issued a letter of invitation. I traveled one morning to London, going to a grim place known as Lunar House, an office block of the infamous Home Office. I had to wait a long time so the bureaucrats would seal my passport with the new permit. The persons in charge of the queues were a bit rude with the people that were waiting to deliver their documents to the bureaucrats. Fortunately, a permit was issued, and my passport was sealed so I could spend all the time that I required in the English language academy.

My time in Saffron Walden after the visa was issued was very happy and relaxing. A lot of my stress disappeared while I was there. Moreover, while being in Saffron Walden, I rekindled my passion for natural history. My years of intense birding made me forget about flowering plants, insects, and in general my interest in all the natural world. Living in the countryside in a new country allowed me to be interested again in organisms that were not birds. All English species were new to me, so going out to the countryside every day was like being a child again. I could now see the world with new eyes, surprised by the simplest details of nature as if I were still a young boy.

During the afternoons, I used to go to the wheat (*Triticum aestivum*) fields that surrounded the town, and during weekends, I used to visit the swamps and the marshes that were further away. How happy I was by being surrounded by nature! Some of the most common animal species of Europe such as hedgehogs (*Erinaceus europaeus*) that were ubiquitous in Saffron Walden were exotic wonders before my eyes. In the wheat fields of Saffron Walden, there were roe deer (*Capreolus capreolus*) and common pheasants (*Phasianus colchicus*).

I met several new friends at that academy. There was a girl whose name was Catalina. There was also a guy whose name was Christian, a girl with glasses named Tamara, and a girl named María Fernanda. I got on well with all of them. During that time, I also met a guy from Venezuela whose surname was Siso. I did not think he was a nice person because he always borrowed money from me and never paid it back to me. Nevertheless, I used to spend a lot of time with him because he was always looking for me and I did not know how to tell him to stop following me.

He was a notorious womanizer and very proficient at flirting with girls. Once I was his translator with three British girls that lived in the town who we found in the main square. The first time we talked to them; he flirted with one of them and ended up kissing her passionately on the mouth that very same afternoon!

The second time we went to meet them; we talked to a female friend of the girl that kissed him on the mouth the previous time. That night, Siso flirted successfully with this new girl, and they practiced oral sex outdoors in an alley. This alley was found in a public place adjacent to a street where all passersby walked. The most surprising fact about this event was that the girl was not a prostitute as she did not charge him any money for the fellatio! One of the girls said, "Tomorrow a new girl will come so the translator can have sex with her." I did not like that idea. How could I have sex with a female stranger that I had never met? It was also shameful that these girls liked to have sex outdoors in the streets of the town. I was not ready to do that!

Siso had a Venezuelan girlfriend. However, he did not feel any remorse for cheating on her. He did not care either for the well-being of the girls that he seduced because after he successfully had sex with a girl, he stopped paying attention to her and immediately looked for another girl to have sex with. This is what he did with a girl named Alice who was studying English in the academy. He told her that he was deeply in love with her, and they became sexual partners. As soon as he had sex with her, he substituted her with another girl named Anya, with whom he had sex as well. Alice hated Siso after this betrayal.

During that time, every time Siso was in trouble with the authorities of the academy,

which was very frequently, I was summoned to the principal's office so I could translate what he was saying from Spanish to English. One day, he had an appointment in the principal's office because he was being accused of having destroyed the door of his bedroom. He replied that he did not destroy it, that it was damaged by a Chinese madman that broke it by kicking it when it was locked inside. The crazy guy tried to force the door open. I do not know whether Siso's version regarding the door was true. One early morning, the academy staff was furious with him because they found him half-naked after midnight, only wearing his briefs, in one of the corridors of the main building where there were only girls' bedrooms. The staff feared he may have been a sexual predator.

Every time Siso finished eating something, he did not bother to throw the remaining garbage in a rubbish bin. He simply threw the litter wherever he would be after finishing eating. When he wanted to urinate, he did not bother going to the toilet. He pissed wherever he would be, and it did not bother him that other people were looking at his penis in public while he was peeing, not even if such people were girls. Every time Siso saw a cat (*Felis catus*) in the streets or even inside a house, he immediately threw stones at the kitty to injure it! And every time Siso saw a young slim woman, he catcalled her saying, "Let me fuck your ass, mama!" He claimed he was ready to have sex with any woman if she was young and svelte. It was paradoxical that Siso was irresistible to girls. Girls felt extremely sexually attracted to him and many of them competed for his attention.

I did not understand them—I thought he was a reprobate. Nonetheless, it seems that was what made him so attractive. He had two different Venezuelan passports with the photograph of his face. It was the same photograph, but that was all that was equal in the passports. Everything else was different. Each one had different given names, different surnames, dates of birth, and national identification numbers. One of the passports was obviously fake: He said he owned such different passports in case he would get in trouble with the law. He would then use his fake passport and not the real one. Something that I really disliked about Siso was that he knocked on the door of my bedroom in the early hours of the morning to wake me up when I was sleeping. He thought that was amusing. It was not. One day Siso said that he would befriend an Arab guy that, according to him, was very wealthy. That was because Siso loved to borrow money and never paid it back. A few days later, he told me that he decided not to spend any more time with the rich Arab because the Arab thought it was funny to hit him in the testicles every time he could.

One night at 0:00, Siso and I quickly returned running to the academy from the

street. The reason was that a ghost scared us. We both saw her. She was able to shift her height at will. This woman was not a ghost such as the ones I perceived in my nightmares when I was a child. In this case, Siso and I were awake, and we both saw her. Siso described the same vision that I saw even if I did not tell him what I saw. Thus, it was a shared mystical experience. I was very happy when Siso returned to Venezuela. No one would take my money, and no one would wake me up during the early hours of the morning.

In September 2002, a group of Austrian high school students arrived at the Bell Language School of Saffron Walden. They only spent two weeks there. That is when I met Julia, who was part of that group. She was 16 years old, and she played a woodwind instrument known as an oboe. She wanted to professionally study music to play her oboe in classical music concerts. (To listen to the kind of music that she loved, please listen to "Requiem in d-Moll (Köchel-Verzeichnis 626)" by Mozart (1791).) Julia's golden hair shined every time she was surrounded by sunlight. She had gorgeous, serene blue eyes. Her utmost beautiful facial features allowed her to look cute and charming. She looked like a fairytale princess! She spoke with an exotic, sexy accent. Even if we never had an English class together, we used to talk during recess. She dreamed about one day having an international lifestyle full of traveling, so she loved meeting people from different cultures to learn about such cultures. As I am Mexican, she was exceedingly interested in knowing about me and my culture.

She also wanted that I would know about her and her culture. One day, Julia was wearing a crop top that allowed her to fully display her bare belly and her innie navel. That day I was sitting in a chair, and she walked close to me. I was able to stare at the glorious beauty of her midriff just 25 cm away from my eyes. Her belly button was round and deep. I do not yet know why I was so fascinated by that girl. I was not brave enough to tell her that I fancied her a lot. However, the last night she spent in Saffron Walden, I gave her a gift. It was a flower of *Eriocapitella hupehensis* that I cut in the garden that night. She was dancing in Winifred Parsons Hall when I approached her. I asked her to please come out of Winifred Parsons Hall for a moment. When we were outside, I gave the flower to her, and we said goodbye by hugging each other. After that night, we kept in contact using email (electronic mail) letters.

I loved sightseeing during weekends. I especially loved museums. London is extremely rich in archeological, historical, and natural history museums. I also enjoyed visiting ancient archeological ruins such as prehistoric dolmens, Roman walls, and medieval castles. My favorite place for sightseeing was the Royal Botanic Gardens Kew in London because its greenhouses

were full of exuberant exotic plants. The most stunning of its greenhouses was the Palm House because it was a full-grown tropical rainforest in the middle of London! In that place, there were even freshwater stingrays (*Potamotrygon motoro*). When I saw these animals for the first time, I did not even know that they existed!

In my academy, there were no ceremonies to honor the British motherland. Unlike the nefarious high school that I attended in Mexico, my new school was not brainwashed with political indoctrination. In this academy, we were taught how to write and speak in English. Nevertheless, at the beginning, I did not have any need to speak in English, as all my friends were Spanish speakers. Afterward, I had Italian friends such as Sara Romani, Giacopo, and Linda. I was able to practice my English skills while talking to them. Afterward, two Mexican guys arrived in the academy. They were Pancho and Simón. Pancho loved singing regional Mexican songs. By imitating him, I got into singing regional Mexican music with my Mexican schoolmates. To listen to one of these songs, please watch the video of "Pedro Fernández - El Siete Mares" (2002).)

Simón fell in love with Linda and ended up having sex with her. Linda also had three other male sexual partners at the same time, and she had sex with all of them. As a result of her multiple boyfriends, Simón had to fight with his fists against a Chinese love rival during a party in Winifred Parsons Hall. At the end of his fight, his face was covered in blood. Looking at a real fight was totally different from looking at karate sparring matches! These guys truly wanted to injure each other! I was appalled. I think that in the brief time that Linda spent in Saffron Walden, she had sex with a larger number of persons than Siso. When Simón held Linda's hand to go with her to his bedroom to have sex with her after the brutal fight, Olivia told him, "If you keep having sex with girls such as her, you will end up having AIDS."

One day I found an earwig (*Forficula auricularia*) in the gardens of the academy. I found it so peculiar that I wanted to show it to my classmates. When I approached the table where my Mexican friends were eating, Simón was terrified by the dermapteran. He started to scream because he was extremely distressed by looking at the insect. I left with the living earwig because I did not want to make Simón feel so upset. Earwigs can indeed pinch people with their cerci, but that is not dangerous at all. The bacteria, parabasalids, and viruses that are sexually transmitted are a hundred times more dangerous! I still wonder why he was so afraid of the earwig, but not of the sexually transmitted infections that were found in the girls with whom he had sex. Indeed, he did not only have sex with Linda. He claimed that he frequently had sexual relationships that lasted for only one night

with female strangers that he met in Mexican bars and nightclubs.

Saffron Walden was close to an old mansion named Audley End. In 2002, it was a museum. This mansion was as large and majestic as a palace. In fact, Saffron Walden did not have a train station. To reach the town by train, one needed to arrive at the Audley End train station. I can remember that at the lake of the palatial house, there were geese that belonged to the species *Branta canadensis*. These birds frequently flew over my English language academy. One of the individuals of that large flock was leucistic! Once there was an open-air market where handcrafts were sold in Audley End. In that place, I bought a wooden staff with a carved western barn owl (*Tyto alba*) on top of it. That was because of my birdwatching hobby.

Jurisprudence

The school administrators of the high school I attended in Mexico claimed to have a great spiritual power. Their so-called spiritual power was not the same as what Emilio the Sage considered as spiritual power. According to Emilio the Sage, true spiritual power can be identified as a quality that allows people to be able to live life to the fullest without any addictions. These addictions could be drug addictions, addictive habits, or codependent relationships. In a way, that is why Emilio the Sage was against birding. He realized that birdwatching can be an addictive behavior. Human beings that do not suffer from addictions are godlike. That is because such humans can be self-sufficient, as they are not attached to external factors to live life.

According to the diabolical school administrators of the high school that I attended, it was okay to state that they had spiritual power and suffered from drug addiction at the same time. That makes me think that according to them, "spiritual power" is simply something that allows one to modify the Universe for one's apparent benefit. Therefore, it would be something like mere cold, hard cash. However, that is not the true spiritual power, as genuine spiritual power only can modify the Universe to allow us to become better people. It would not allow us to debase ourselves. That is the difference between spiritual power and other forms of power. Economic power or the power to influence other people can provide either good or bad fruits to the moral agent that has it. Spiritual power can only benefit the individual.

Saldaña's problem was his definition of "philosophy." Throughout time in different societies, the word "philosophy" has had different meanings. According to Emilio the Sage, it means the art of living life virtuously, the art of writing about abstract topics poetically, and the art of studying the

supernatural to attain personal power by means of such studies. According to philosophy professors, "philosophy" means an academic discipline whose aim is to write papers in books and journals. The audience of such texts is comprised of highly specialized university professors that study abstract topics. The philosophical texts are written in a boring, complex, and unintelligible language that is used to state propositions that could be easily said with a simpler language.

Hence, Saldaña did not find what he was looking for. His experience has to do with what is known as the fallacy of equivocation. That is because he thought that two different concepts were the same thing simply because the same word is used to refer to them. The philosophy of Emilio the Sage completely changed the person. The philosophy of the university academics changes the way the person writes. Throughout time, the word "philosophy" has had three different definitions that we must not confuse with each other. According to the pre-Socratics, it was the study of the physical laws of the natural universe, and of the psychological laws of the human mind. According to the ancient philosophers that lived after Plato, it was the same definition as the one taught by Emilio the Sage. According to the philosophers that lived after the split between continental philosophy and analytic philosophy, it was the same definition used by modern university academics.

Mariana used to say regarding raves that in such dance parties, the DJs were the "shamans" that guided the trip of all the ravers. According to her, a shaman is someone that guides the psychedelic trips of people toward unknown realities. In the same way, a DJ using electronic music coordinates and guides the psychedelic trips of the people who dance in the raves after they have ingested entheogens. I did not like this analogy. Mariana's argument commodifies shamans, so their only function is to entertain dopeheads. I find this offensive, as among the ancients, a shaman was a very important officer who was revered by one or more tribes. The shaman was a physician, a priest, and a political authority. The shaman's job was essential to ensure the well-being and survival of ancient tribes.

It seems to me that Mariana's lack of respect for shamans comes from the commodification of the mushrooms that belong to the genus *Psilocybe* in Huautla de Jiménez. As the traditional use of these species of fungi comes from Indigenous religious practices, Mariana thought that she was taking part in a shamanic ritual while taking hallucinogenic mushrooms there. Nevertheless, the people that currently sell them in Huautla de Jiménez are not shamans, nor are the rave DJs.

According to Emilio the Sage, we ought to do whatever makes us feel good (if and only if such activities do not harm us). This means performing activities that would allow us to get into a flow state. This is what inspired me, despite the opposition of some, to study abroad in the United Kingdom. I went there to live a passionate, adventurous lifestyle, a life beyond the monotony and lack of freedom that I suffered in Mexico City during the time I was attending high school. I fulfilled my dreams. I visited new lands, I met new people, I learned about new cultures. In the same way as the ancient Cynic philosophers, I became a citizen of the world, not just a citizen of my city. As a symbol of this, I bought a facsimile of an old map of the whole world in the British Museum. I pasted that poster in my bedroom at the Saffron Walden Bell Language School. This map was titled "Nova Totius Terrarum sive Novi Orbis Tabula." It was made by Blaeu (1665).

In her poems, Mariana always wrote about European species of birds, such as the common nightingale (*Luscinia megarhynchos*). She also talked about medieval castle ruins and European forests full of mist. She claimed that she wrote about such topics because even if she never visited Europe, European culture was very familiar to her. I think that is because that was the culture that the Spaniards introduced to ancient Mesoamerica that eventually led to the development of Mexico as a nation—thus, being the basis of modern Mexican culture, it was in a way part of her own culture. When I lived in Europe for the first time in my life, I saw the birds, the castles, and the landscapes that Mariana talked about. They are indeed poetical!

The landscapes and places indeed have a more poetic meaning when one has a mixture of complex passionate emotions, such as the ones I had when I was living in Saffron Walden. One of them was the emotion of being in a new place where everything was novel and unknown to me. Another emotion was a result of living my youth as fully as possible. Furthermore, I also experienced emotions that were intrinsic to environmental changes. These last types of emotions were the ones caused by looking at agricultural fields and forests during sunsets, when they were covered by mist, and when it was raining.

The place where we live is very important in making us who we are. In 1999, Emilio the Sage went to live to Cuernavaca. His way of thinking and speaking changed. In the same way, Saffron Walden changed me a lot. I stopped being as anxious as before. I did not suffer from stress anymore. I started to read more and to watch more carefully the natural world that surrounded me. I became a cultured person.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

Part Three

The Doctrine of Jana the Refulgent

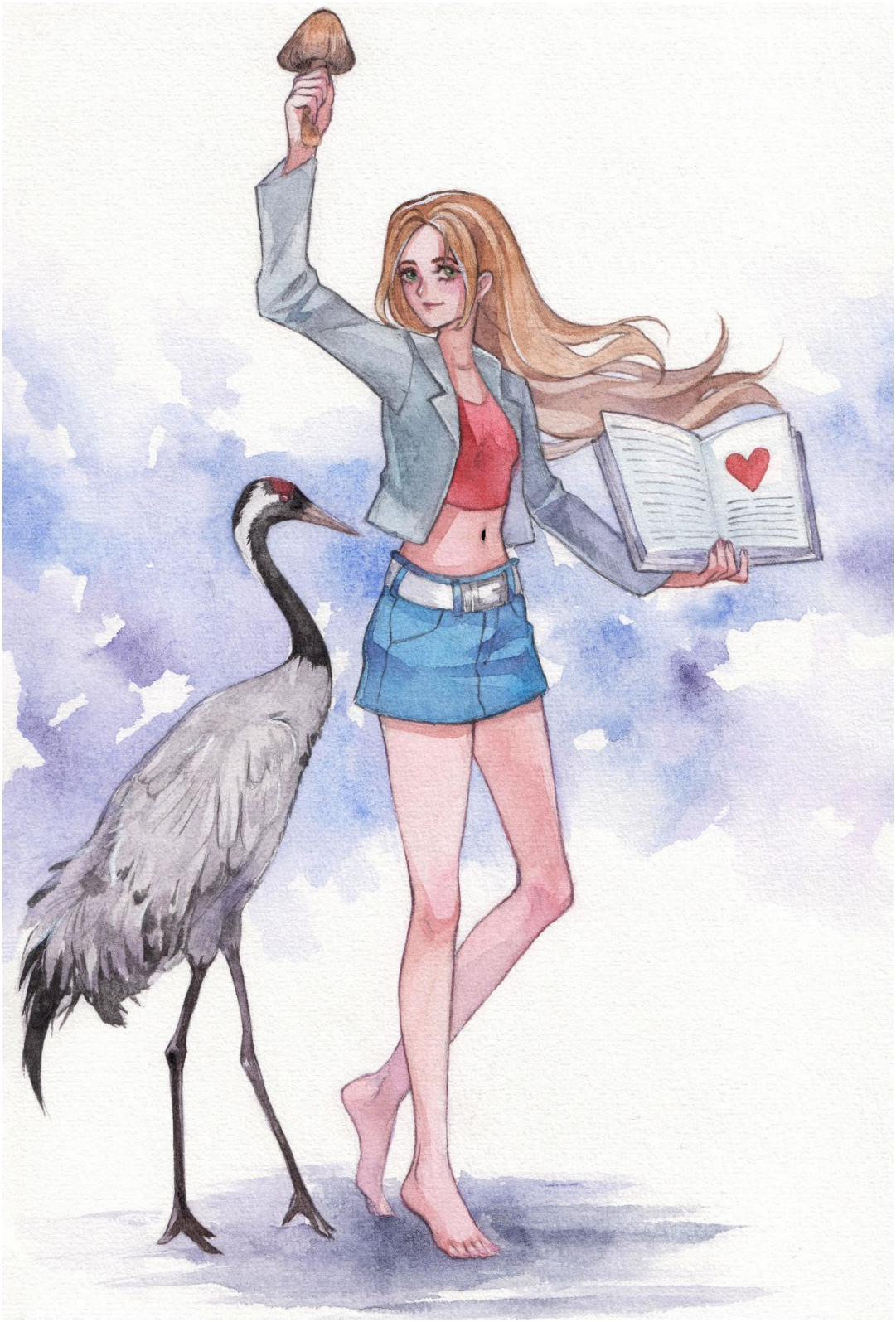
“I am glad you are being more active and taking part in many extra-curricular activities. I am sure that that way you meet a lot of people. Which leads me to your next question—‘how to find a girlfriend.’ I am afraid there is no one answer to that and no formula. I think the best thing to do is to meet as many people as possible, and amongst them there may be an interesting girl that you like and that likes you. You then should ask her to go for a drink with you or for a coffee. Flowers are a very nice idea, but you should wait for a while before you send them, as us girls can get a little embarrassed.

Lastly, I think, don’t push it too much. I am sure you will find someone very, very lovely who you will be able to spend the rest of your life with!”

—Jana the Refulgent

***Coffea arabica* Linnaeus, 1753 (Gentianales: Rubiaceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 859.**



Portrait of Jana the Refulgent

Illustration made by Kristina (Princess Ailish). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 859.**

***Psilocybe caerulescens* Murrill, 1923 (Agaricales: Hymenogastraceae)**

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CHAPTER 14. *TRITICUM AESTIVUM*

I liked the teachers at the Saffron Walden Bell Language School. They were gentle and friendly, totally different from my teachers at the high school I attended in Mexico City. Some of my most endearing teachers of English at that time were Anna Young, Jim Carmichael, and Nigel Newbrook. In the library I read a lot of novels that were written in English. In that way I increased my vocabulary.

My classmates drank a lot of ethanol (C_2H_6O). They were good persons because they never pressured me to drink. Yet, they would get drunk every night. One weekend, Catalina was drunk all the time. Also, another night, Catalina was so drunk that she took off all her clothes in front of all the students who attended a party. I can honestly say that Catalina looked erotically beautiful while being completely nude and exposing herself. I never thought she would be so attractive when I looked at her every day while she was dressed. Especially because her face was not pretty. However, while being stark naked and having an utterly gorgeous physique, no one paid attention to her face.

I admire Catalina a lot for getting naked in public. That is how all good-looking girls should behave, and society should not hide their sexuality, but praise it.

Another day, a fellow student (surnamed El Ouali El Alami) was so drunk that he jumped out of the window of his Butler Hall bedroom. That window was 4 m above the ground. Fortunately, his body did not suffer a lot of damage, but because of this accident, plaster casts were put on both his fractured arms. Strangely, during that time I did not miss anything from Mexico except Camilo, my soft toy. Before traveling to England, I used to sleep hugging it. Very frequently while being in Saffron Walden, I dreamed that I was hugging Camilo, and when I woke up, it was not there...

Autumn arrived, and the environment changed radically. The luminosity over the landscapes full of flowers disappeared. Everything became dark and cloudy. The leaves fell from plenty of trees and herbs stopped flowering. During autumn, the British celebrate a festivity known as Guy Fawkes Night. Guy Fawkes is the man whose face is worn as a mask by some activists in their protests. This mask is also a symbol for hackers.

King Henry VIII of England created the Anglican Church as a schism from the Catholic Church. Henry VIII and his daughter Elizabeth I got rid of English monasteries and convents. They also persecuted all religious people who were openly Catholic. When King James VI of

***Triticum aestivum* Linnaeus, 1753 (Poales: Poaceae)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 860.**

Scotland became the first head of state of the United Kingdom, the Catholics expected that he would reinstall Catholicism as the official state religion and that he would support the Holy See in Rome. As he did not do that, Guy Fawkes, a Catholic terrorist, planned to kill him so his daughter would become the new queen and would restore Catholicism in England. The terrorist was arrested and executed and since then, the British celebrate that the conspiracy to assassinate the king failed. Guy Fawkes Night is celebrated in all British cities and towns with fireworks. These fireworks are an allegory of the explosives that Fawkes attempted to detonate to murder the king. In Saffron Walden, the local government organized a firework show in a park at the north end of the town near the edge of wheat (*Triticum aestivum*) fields. This park was known as The Common. All the townspeople and all the students from the Bell Language School went there to see the multicolored fireworks.

Arévalo was one of my classmates in the high school that I attended in Mexico. His parents were eminent physicists. They once worked at the University of Cambridge. Arévalo saw the university when he was a teenager and was amazed by it. He astonished us with the stories about that university. I was so motivated by what Arévalo saw that one of my goals in my "Journey" to study in the United Kingdom was to study there. When I went to the University of Cambridge to enquire how to apply, they told me that the Bachillerato Mexicano, the Mexican high school, was not good enough to start pursuing an undergraduate degree in a British university. I was perplexed because that was the entry qualification to study at Mexican universities. To be able to attain a bachelor's degree in the United Kingdom, I was required to study AS and A-levels. I asked them where I could study that. They told me that I could ask in any sixth form school and said the following: "On the next street, there is a school. Ask there, but do not ask only in that one, ask in several schools so that you know several different educational options."

Sara Romani arrived at my school together with Giacopo and Linda. All of them came from Verona, Italy. They arrived together because they came from the same high school. Sara Romani was a blonde girl. She had blue eyes and was very thin. The skin of her face was totally covered by acne, an infection caused by the bacterium *Cutibacterium acnes*. She had a shoulder-length hairstyle, and she frequently wore a headband that looked like the ones worn by some martial artists. She was always smiling. She was also always telling jokes and being funny. She spoke by shouting when she was excited by anything that she found hilarious. Every time I said something about sex or sexuality, she laughed out loud. Every time I

gazed at the beauty of her bare belly and her innie navel, she asked me while merrily smiling: "Why are you looking at my belly button?"

It was in that cold and dark autumn that I got influenza. I think I was infected by a Chinese guy that was sneezing and suffering from a runny nose while I was sitting next to him on a bus. This guy was my schoolmate, and we were traveling on a school trip to Ely, England. It was difficult for me to suffer from my first illness while being alone, far away from my family, but it would not be my last illness in such a situation. My influenza symptoms did not allow me to look for a sixth form school. I was only able to ask in the first school that I visited. The days turned into weeks and after the influenza and as a complication of it, I suffered from a bacterial infection in my upper respiratory tract that was caused by *Streptococcus pneumoniae*. This new disease made me ill for a longer time than I initially thought I would be ill.

As a result of these ills, I ended up joining the only sixth form school that I visited. It was in Cambridge, England. This school was Cambridge Arts & Sciences. The principal was Elizabeth Armstrong. Its logo was a lion (*Panthera leo*). I guess it was chosen because of the four lions in the coat of arms of the University of Cambridge that are in the same pose as the lion in the school logo. The university lions are symbols of the royal patronage of Queen Elizabeth I, who reigned at the time the university coat of arms was granted. These royal lions come from the coat of arms of crusader King Richard Cœur de Lion, who was compared to a lion because he was a vicious warrior.

After I recovered from my respiratory illness, I went to a nature reserve known as Welney Wetland Centre. It is found in the Fens, the swamps and marshes that are found between Cambridge and King's Lynn. There was a large bird observatory that doubled as a visitor center. The observatory overlooked a lake with several paths to hike around the marshes. The day I visited, there was a two-day event called the Festival of Swans. Among its activities there was a bird counting competition. Teams were not involved; it was individual. The person who could count the largest number of species of birds by using binoculars would be awarded with a field guide, the "Collins Bird Guide" (1999). I had never birded as a competition, but I did it. It was extremely enjoyable because I also spotted 11 species of birds that I had never seen before, including the whooper swan (*Cygnus cygnus*) and the ruff (*Calidris pugnax*). At the end, I won the competition!

Jim Carmichael, one of our teachers, gave the class a special task. We had to design websites that he later uploaded to the Internet. Each student had to design a website. The aim of such work was that we would write in English so Jim could mark our language skills. I made a website about

the natural history of the non-human wild animals of Saffron Walden. As I was a naturalist that always used to go hiking to the countryside to study all sorts of organisms, I could write about everything that I observed in my field walks. To make such classwork, I started looking for Internet references using the AltaVista web search engine that Daniel Huerta recommended to me. Nonetheless, Jim Carmichael told me not to use it, that it would be better if I would use Google, as it was by far better. Since then, I have used Google. In the following years, Google became the main access to all the world's information and an extraordinarily rich and powerful company.

In the last two weeks that I was at Bell Language School, there was a fellow student from Siberia. Her name was Irina. She was a blonde, blue-eyed hottie with a highly attractive body. She always wore makeup, dressed, and wore accessories in the most fashionable and chic way. Even in the cold British autumn, she showed off her fully uncovered, stunning, toned midriff and her outie navel for all to see. Irina was friendly and a good girl.

Olivia took photographs of herself with people of diverse nationalities that constantly arrived at the school. She pasted such photos on the wall of her bedroom as if she were collecting friendships from all over the world. It was something similar to collecting bird sightings as I did in my life list. In the few months that Olivia and I were living in Saffron Walden, Olivia's weight increased a lot. I had never seen a person become so fat in such a short time. I suppose she suffered from a thyroid gland illness, as I have never seen anyone change so suddenly and rapidly.

In modern times, the Saffron Walden Bell English School no longer exists. The main building is now a condominium named Bell College Court. Its name is because it used to be a school of English of the Bell company. The gardens and the nature reserve have been destroyed, and, in that place, there are streets and private houses. Butler Hall has been demolished... Bell English corporation still exists, and it has academies in Cambridge, London, and St. Albans.

In November 2002 in China, a virus that infected bats (*Rhinolophus sinicus*) became a zoonosis that infected civets (*Paguma larvata*). From them, the coronavirus infected humans. It was named severe acute respiratory syndrome coronavirus (SARS-CoV). This epidemic outbreak lasted for about two years and was found mostly in China. A very similar virus that was also from China and that is named SARS-CoV-2 was the cause of the dreadful pandemic disease known as coronavirus disease 2019 (COVID-19). This horrendous pandemic outbreak paralyzed the world and its economy 17 years later.

I celebrated my 18th birthday. That is the age when one becomes a legal adult in Western culture.

In December 2002, my parents traveled to the United Kingdom to visit me. We went to the Tower of London, the place where the Crown Jewels of the United Kingdom are found. The guards that work there, the so-called beefeaters, keep ravens (*Corvus corax*). According to an old tradition, ravens need to live in the Tower of London to prevent the monarchy from falling.

We also went north of Great Britain to the Scottish Highlands. It is a very impressive place with a lot of history. In the Highlands, I saw several wild animals such as an otter (*Lutra lutra*) and a capercaillie (*Tetrao urogallus*). During those holidays, we were traveling by airplane and by train with all my clothing inside a huge suitcase. Among my properties during travel, I also had a wooden staff. It was a staff with a carved western barn owl (*Tyto alba*) on top of it.

We spent Christmas in Inverness, Scotland. During Christmas dinners, the British have a tradition. They give to the people who gather for the dinner certain cylindrical cardboard boxes known as Christmas crackers. When these boxes are pulled from both sides, a noise that sounds like an explosion is heard and that is how they are opened. Inside the boxes, there are crowns made of paper that somewhat resemble the calyxes of pomegranates (*Punica granatum*). The kings of many Eurasian cultures have worn crowns that look like pomegranates because it was considered a holy fruit. Inside the cracker, there is also a brief poem written on paper and things to eat.

On Monday the 6th of January 2003, I started attending the school where I would study my AS (advanced subsidiary) and A (advanced) levels. All the students spoke English. No one spoke Spanish. I did not know what to do. For the first time in my life, I had to learn English with no other options. In the beginning, as in any other new school, it was a bit difficult for me to get used to my new environment. I did not have any friends. Hence, I focused most of my attention in my online conversations with Julia, the Austrian girl that I met in Saffron Walden. She gave me a lot of love and support during such hard times.

Cambridge was a large town crossed by the River Cam. The town grew around its banks. There was an ancient archeological ruin, a mound where the medieval castle once stood. The colleges of the University of Cambridge were found at the riversides. Some of these buildings are medieval, but there are buildings of all the ages that have been built since then. My mother claimed that the historic downtown of Cambridge was lugubrious and somber. Almost all the colleges had churches that were full of old, valuable art. At the sides of the historic downtown, there were plenty of Victorian

and modern houses that were average, like those ubiquitously found in the London suburbs. The most charismatic wild animals found in Cambridge were the common bream (*Abramis brama*), the common chub (*Squalius cephalus*), the northern pike (*Esox lucius*), the red fox (*Vulpes vulpes*), the American mink (*Neogale vison*), the European rabbit (*Oryctolagus cuniculus*), the mute swan (*Cygnus olor*), the mallard (*Anas platyrhynchos*), the common wood pigeon (*Columba palumbus*), and the carrion crow (*Corvus corone*).

I took some of my classes in the building of the Cambridge School of Visual & Performing Arts. My lab science classes were in what is now known as Stafford House Cambridge (52.20869796906536, 0.11877667394839025), which used to be known as the Science Block. Its name was changed because nowadays, English classes are taught there instead of science classes. These days, science classes are taught in the labs of Elizabeth House, a building that did not exist when I attended Cambridge Arts & Sciences. At the entrance of the Science Block there was a Jerusalem cross. This was the coat of arms of the now defunct Crusader Kingdom of Jerusalem. At the time I attended Cambridge Arts & Sciences, the library and the common room were rented to my school by the Cambridge Union Society. This means we used their facilities that were at the other side of Round Church Street. The building of the Cambridge Union Society was designed by the renowned Victorian architect Alfred Waterhouse, who also built the "cathedral to nature" that is the Natural History Museum, London.

The building of the Cambridge Union Society was bombed by the Nazis during World War II. However, it was rebuilt later. At the entrance of this building was the coat of arms of the University of Cambridge. The Keynes Library, the library of the Cambridge Union Society, was full of fascinating ancient tomes. When Luca Ghini made the first herbarium in history, such herbarium comprised herborized plants that were pasted to the blank pages of a book. All the pre-Linnaean herbaria were like that, until Linnaeus started to mount plants out of books in individual sheets so they could be stored separately. That is the origin of modern herbaria. In the Keynes Library, there were old-style herbaria, where real dead plants were mounted on books' pages. As the Cambridge Union Society rented rooms to my school, all the students were members of the society. Thus, we were able to attend the debates and the talks by experts. The Cambridge Union Society was created as training to educate future politicians that were studying at the University of Cambridge. That is how they would learn how the House of Commons and the House of Lords functioned. The debating chamber of the Cambridge Union

Science Block of Cambridge Arts & Sciences, Cambridge, England, United Kingdom

Illustration made by Hugo Arboleya. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 860.**

Society was extremely sumptuous and enormous! All of it was full of heraldic regalia.

Every Monday, all the students at my school sat in the debating chamber so we would know what was going on at the school. As a joke, I loved to sit in the throne that was in the middle of the debating chamber when the debating chamber was not being used. The four subjects that I studied in AS and A-levels were mathematics, physics, chemistry, and biology. In my new school there were no ceremonies to honor the British motherland. The students were not required to wear any uniform.

Before the Cambridge Union Society building was made in 1866, behind the Church of the Holy Sepulchre, there were private houses with gable roofs. These houses were found even over the place where the Round Church Street is now found. These houses were demolished to build the Cambridge Union Society. Not far from my school was the majestic St John's College, University of Cambridge. Its grand tower could be seen from my school. The Church of the Holy Sepulchre was built in the Middle Ages at the east side of the Via Devana, a Roman road that was found in the very same place where Bridge Street is now found. Every morning, I walked through Bridge Street to reach my school. In fact, the bridge of Bridge Street crosses the River Cam and is known as Magdalene Bridge. It is found in the very same place as the Cam Bridge was, long ago, after which the town Cambridge is named.

In my school, there were personal tutors. They were staff members that took care of students on an individual basis. These students were assigned to them. The support provided by personal tutors was both in academic matters and in daily life issues. My personal tutor was Ken Martin. I cannot say a lot about him because I rarely spoke with him, and we typically only exchanged words to greet each other. I can remember that he spent all day drinking infusions of *Camellia sinensis*, the famous tea that Chinese, Japanese, and Korean peoples drink. Sometimes this tea is made using oxidized or fermented leaves. Very often, it is mixed with sucrose from sugarcane (*Saccharum officinarum*), essential oil of bergamot (*Citrus* x *bergamia*), or milk that comes from cows (*Bos taurus*). (To know why the scientific name of the bergamot orange has an "x" in the middle, please see the glossary.)

In my new school, I did not live on my own in a student residence. Now I lived in a house owned by a man named Tom and his wife. They both lived in their house where I was a tenant. He rented some of the bedrooms of his house to the students that attended my school. Tom worked in the school, but in fact, he only went there to sit and chat. He was quite lazy and was paid for doing nothing. I never knew what his actual job at the school was. Tom used to drink

too much beer. He loved eating food that was extremely rich in fat. He spent all his time sitting on a couch watching television. Beer is a beverage with ethanol (C_2H_6O) that is made of barley (*Hordeum vulgare*) and of hops (*Humulus lupulus*). It is fermented with yeasts that belong to the genera *Saccharomyces* or *Torulaspora*.

The stuff that Tom found amusing was coarse and vulgar. For example, when he heard in his house that a student burped, he immediately clapped his hands and laughed because he thought that was funny. He always wanted to show that he was superior to the students. I did not care because the Stoic teachings of Emilio the Sage made that all irrelevant to me. However, my other classmates got angry because Tom attempted to arbitrarily rule them or rebuke them and ended up quarreling with him. The reason was that all the students were wealthier than Tom. Therefore, he was envious of them—so he wished to display superiority and humiliate them. When he was furiously quarreling with the students, he always spoke about money and how he was poorer than them. That was his only reason for being angry...

When my parents visited me in the United Kingdom, they gave me the books of the "Iliad" and the "Odyssey" that formerly belonged to my grandfather Tomás. They were extremely old books made in 1921. The wise José Vasconcelos published them to educate the Mexican citizens in the classics. The government of Mexico gave them to my grandfather Tomás as part of the psychological experiment of the Casa del Estudiante Indígena, where my grandfather was an experimental subject that was being studied. I enjoyed such books a lot! They taught me how to openly express my emotions like the heroes of the Trojan War. Moreover, in the Olympian religion, I found plenty of the non-Jewish cultural background of Christianity.

During the times of the Aztec Empire and of the Spanish Empire, snowfalls were frequent during winter in Coyoacán, Mexico City. Due to climate change, snowfalls became uncommon until it snowed for the last time on Wednesday the 11th of January 1967, almost 18 years before I was born. During the cold January 2003 when I was in Cambridge, England, I finished my lessons one afternoon and as I was exiting the school, I saw how snow started to fall from the clouds. That was amazing. I had never seen the sky snow before. It was snowing throughout the whole night.

The next day, Friday the 31st of January 2003, the town looked incredible! All the streets and the roofs were fully covered with snow! It would not be the only snowfall that I would see, but it was the most special one because it was the first one and, on that day, I met someone very important in my life.

As every morning, I went to my school's computer room to read emails (electronic mails) before going to my lessons. When I was in that room, I was informed that due to a decision of the government of the United Kingdom, classes would be suspended due to the snowfall. I went to the common room. The common room was the Blue Room of the Cambridge Union Society, a place that now is part of The Orator, a restaurant and bar (52.20870116390105, 0.11905246938251401). In the common room, I saw a slender girl. She had a cute and friendly face. She smiled at me. I did not think that was important. The smiling young maiden approached me, and she said:

"Hi! I'm Jana! I come from the Czech Republic! What's your name? Where do you come from?"

We briefly talked to each other, mostly about the snow. More about the snow than about us because I was ecstatic about the ubiquitous whiteness in the streets! I spent all the afternoon thinking about the girl with whom I had that brief conversation. The reason was that I thought she was beautiful. She was, in fact, one of the most gorgeous girls that I had ever seen. It is not strange that I had met her 47 m away from the Roman road known as the Via Devana (which, translated, means "The Road of the Goddess"). Indeed, Jana was a true Goddess!

That stunner was the first person that attempted to befriend me while I was in my new school. Jana was a kind and generous girl with a big heart. She was studying the last year before going to university. As she was studying Spanish as a subject, it was handy to practice it with me. I always thought Jana was sexually attractive. She looked stunning! However, at the beginning, I did not totally like the way she behaved. Very frequently, I went to do revision at the Keynes Library where the old herbaria were found. There I found Jana who started to talk to me. Afterward, when I was in the common room, she immediately came up to me to chat with me. If I was in the garden of the Cambridge Union Society or in the garden of the Church of the Holy Sepulchre, she suddenly would approach me and talk. Also, every time I came out of a classroom, if she was close at hand, she walked up to me to start speaking to me. It was as if Jana was following me all the time.

As a matter of fact, every time that her friends spotted me, they quickly shouted, "Jana, come to see who is here!" At that time, I did not know what to think. Was I the crush of Jana? While I was attending the Mexican high school, there were several girls that wanted to be my girlfriends. They in fact confessed that to me. Nevertheless, none of them followed me all the time as Jana did. Thinking that Jana might feel sexually attracted to me would be very flattering. Even if she was exceedingly

sexually arousing, there was something about her that I disliked. I did not like that she was always following me wherever I went, always trying to keep me paying attention to her. Furthermore, she spoke very quickly and was very noisy. Nonetheless, after being followed so much and after talking with her so much, I started to like the way she was until I ended up feeling a fond affection for her.

Jana was studying history, sociology, Spanish, and the advanced extension award in Spanish. Originally, she was going to study medicine, so she studied in an American high school focusing on health and science topics. Afterward, while studying her A-levels, already in the United Kingdom, she decided she wanted to study different topics to be able to attain a bachelor's degree in law. That was what she was doing by the time I met her. Jana was excited that I wanted to apply to the University of Cambridge. She also applied there but was rejected. The fact that she applied there made that something we had in common.

The reason why Jana was studying in the town of Cambridge was because she desired to study at the University of Cambridge. After graduating from the American high school, she was able to decide whether she wanted to study her A-levels in the town of Oxford or in the town of Cambridge. She decided to study them in the town of Cambridge because she fancied more the University of Cambridge than the University of Oxford for her bachelor's degree. Jana wanted, even if she was not able to study at the University of Cambridge, that I would be able to study there. She wanted to support me in every possible way so I could achieve my dream. She felt that if she was able to train me to be suitable enough to be accepted by the University of Cambridge, she would in a way fulfill her dream, even if she would not herself be the one accepted by the University of Cambridge. She was not accepted because in the Cambridge interview, the interviewer asked her about Czech politics, and she did not know about that. She held a grudge against the person who rejected her. She said he was ugly, old, and horrible...

Jana was concerned because she saw I was alone without any friends. She did as much as she could to help me to be involved with other people at my school. She gave me advice to make new friends. Her aim was also that I would become a popular student. At the beginning, I did not like that she wanted to change the sort of person I was. Nonetheless, every time I needed help, she was there for me. Thus, I started to follow the path that she taught me. Five years before, popularity was unimportant to me. At that time, Yamir wanted to convince me to become a goth to be popular. I was not interested—the reason being that my classmates at that time spoke Spanish, and it was easy for me to speak with all of them. If

there would be people ready to talk to me, I was fine. It did not matter how many people would speak to me or how many would gossip about me or in what way they would gossip about me. Now that I was studying in a school where the language spoken was unfamiliar, it led me to be insecure about talking to others. Popularity became something needed to have social interactions. Jana would be my guide to attaining the popularity that I wanted. Moreover, she would not be like Yamir. Unlike him, she would not make me popular by branding me through a false façade based on my outfits. She would authentically change me by changing my cognitions.

St. Valentine's Day is the death anniversary of a Christian priest whose name was St. Valentine. He underwent martyrdom and was killed during one of the persecutions against Christians that were organized by the government of the Roman Empire. Some centuries later, poet Geoffrey Chaucer wrote in his poem titled "Parlement of Foules," that St. Valentine's Day was a special day to celebrate love. It is a tradition that on St. Valentine's Day, people who love (or sexually desire) each other would give gifts to each other. On Friday the 14th of February 2003, St. Valentine's Day, a secret admirer sent to me a red flower of *Rosa*, with a red heart made of paper that had the following words written on it:

"Peregrinus Hierusalemsis, you are cute."

I threw the *Rosa* flower to the garbage bin, but I kept the heart. When I knew that this gift was sent to me by Jana, it became an item that would allow me to remember her. It also became her relic and a symbol of her and of all her teachings. Since then, that heart is kept inside a box within a reliquary in an altar. The reason why the message was written on a red-colored heart is because it is the symbol of love. 14 years later, I decided to include the heart that Jana gave to me together with its box as the crest of my personal coat of arms. My coat of arms was designed in black and white by me. It was redesigned and blazoned with colors by Alfonso de Ceballos-Escalera and professionally painted for the first time by Carlos Navarro Gazapo. This original version was registered in the official records of the Cronista de Armas de Castilla y León, a Spanish heraldic authority, on Tuesday the 23rd of January 2018. The version of my coat of arms that is depicted in this book was painted by Michelle Maiden (**page 4**).

Now I shall continue describing the events that happened to me in 2003. One day, Theia, (one of the friends of Jana) gave me a handwritten letter on paper from Jana. In this letter, Jana formally invited me to go out for our first date. Previously on that very same day, I watched for the first time a common crane (*Grus grus*). Therefore, that bird species became a symbol of Jana. I had dinner with Jana at a Chili's restaurant in Abbeygate House that does not exist

anymore (52.2057985713879, 0.13437196769302182). On that night, we knew a lot about each other. I knew how Jana was quite young when she went to live alone in the United States of America. I knew how she learned there to be self-sufficient and how she attempted to be excellent, so she could obtain special privileges not attained by others. The reason was that being a foreigner in the United States of America made her socially inferior to her American classmates. All her methods that she taught me so I could undergo social integration in my new school were learned by her because of the difficulties that she faced. Hence, she did not teach me anything that she would not have tested for herself in the past.

Moreover, Jana was an avid reader of books, so she did not just behave in a strategic way because of her own experiences while living alone in a foreign country. She also learned a lot about how to behave in a suitable way by spending a lot of time reading. The previous school attended by Jana was the North Newton Jr./Sr. High School in Indiana. There she empirically learned that to be loved by the teachers at her school, she needed to be the most brilliant student, and that to be loved by her classmates, she needed to be the most affable, cheerful, and talkative student. Being outgoing with people was one of her main abilities. She taught me the conversation topics that were useful to her to meet new friends. Jana warned me that our school had plenty of drug addict students. She begged me never to attempt to take drugs to make new friends. She said that my health was more important than any friendship. Jana only drank ethanol, no other recreational drug. She rarely drank and when she did, it was in moderation.

Jana frequently told me rural folk narratives from Královéhradecký Kraj, Czech Republic. For example, once she said that if one listens to the steps of a person walking in the woods of the Staropacká Hora and if no human can be seen around, that is in fact the sound made by the steps of a hedgehog (*Erinaceus roumanicus*), as according to her, there is no difference between the sound they make by walking and the sound made by humans. She also said that the first autumn snow always happened on the 11th of November, St. Martin's Day. According to her, the snow is the white horse (*Equus caballus*) of St. Martin of Tours, when he comes down from heaven as a Roman cavalry soldier riding his charger. Snow was culturally important for her, because in her Czech hometown, there was plenty of snow. There was so much snow that there was a ski center there. Obviously, the favorite sport of Jana was skiing, but she also liked playing tennis. When Jana started teaching me, we were both 18 years old.

Jana of Stará Paka, Czech Republic, is the daughter of Lubomír and Hana. She was born on Saturday the 30th of June 1984. She

was born during the viceroyalty of President Gustáv Husák. He was a vassal of by then moribund Konstantin Ustinovich Chernenko, general secretary of the Communist Party of the Union of Soviet Socialist Republics. When Jana was born, the Sun was together with Planet Venus, the Goddess of love and sexuality; and with Planet Mercury, the God of magic and philosophy; in the constellation known as Gemini, the divine twins. The Moon dwelt in the constellation known as Cancer, the freshwater crab (*Potamon mesopotamicum*) that the Sumerians saw in the night sky (to find out why this information does not agree with the signs of the zodiac of astrology, please see Appendix B). Jana is celebrated on the 12th of March, the day when I fought the Princess of the Wraiths...

Jana was the perfect girl. She was my princess of rhodium, iridium, and gold. Her soul was totally made of precious metals. Her belly button was the temple where I worshipped her. Her stomach was flat. Her waist was slim. Her back was smooth. Her skin was pale. Her breasts were erotic. Her hips were sexually arousing. Her nipples were intoxicating. Her mons veneris was glorious. Her arms were delicate. Her vulva was mystical. Her hands were expressive. Her vagina was mysterious. Her neck was elegant. Her clitoris was her greatest pleasure. Her cheeks were youthful. Her buttocks were attractive. Her lips were smiling. Her thighs were graceful. Her eyes reflected all the celestial stars. Her knees were seductive. Her hair was a toy played with by the wind. Her popliteal fossae were sultry. Her personality was sanguine. Her calves were slender. Her intelligence was the divine fire that Titan Prometheus stole from the Olympian Deities. Her feet were beatific. Her laugh filled all my days with joy... There is nothing more delightful in nature than the nude body of an attractive girl such as the refulgent Jana.

As Jana the Refulgent knew that I was captivated by her body, every time we went out for a date, she was scantily clad in skimpy outfits that allowed her to show off more of the skin of her body than usual. During our dates she wore very short miniskirts and very short, sleeveless crop tops. This allowed her to give me a full view of her bare arms, legs, belly, and innie navel.

While living alone far away from home and her family, Jana the Refulgent started to develop certain behaviors that were psychological coping mechanisms, like pasting photographs of her family in her bedroom. She also kept family photos in her wallet. Keeping one's family photos inside a wallet is a weird behavior. However, in old years in certain cultures, it was the norm. I read how during World War II, it was common amongst Japanese soldiers.

That same year, on the global stage, the government of the United States of America claimed that dictator Saddam Hussein, the

president of Iraq, kept secret weapons of mass destruction. As part of the Global War on Terrorism on Thursday the 20th of March 2003 a war against Iraq was declared. American president George Walker Bush the younger was the son of former president George Herbert Walker Bush the elder. Bush the Elder declared war on Iraq during his reign, the Persian Gulf War. Therefore, he and his son, Bush the Younger, considered that Saddam Hussain was a threat for the world and wanted to take revenge on him, as he was their enemy during the Persian Gulf War.

Moreover, the terrorist attacks against the United States of America that happened on Tuesday the 11th of September 2001 were, according to Bin Laden, because the American army was stationed in Saudi Arabia ready to attack Iraq in case there was a war. President Bush the Younger commanded the government of the United Kingdom to help him fight against Iraq. The British politicians thus sent the British army to fight in Iraq. I did not like that there was war. I thought it was unnecessary to shed so much blood, as Bush the Younger was doing. A teacher of English in my school whose name was Georgina Pedrick was extremely happy that there was a war in Iraq. She, as most people at that time, believed that everything can be solved with wars, violence, and killing people. When she noticed that I was a pacifist, she hated me... I learned to be a pacifist thanks to the teachings of Enríquez, the lawgiver.

Jurisprudence

According to the teachings of Jana the Refulgent, what led my schoolmates at Bell Language School to be so drunk was their social environment. As most of them behaved like that, all of them accepted it as a good behavior and ended up becoming drunkards as well. People tend to copy whatever they see in their peers. In that way, the social interaction between all people ends up creating a culture. A way to live within a society of drunkards without being one of them is to use the technique that Jana the Refulgent used. Be highly eloquent and talkative with everyone until liked by all. When everyone ends up liking you, they will have enough respect for you to allow you to be different from them. If someone does not have any respect for you and your choices, what you must do is to stop spending time with that person and look for other people who will accept you as you are.

According to Jana the Refulgent, there are so many people all over the world and it is always possible to find such people that are the best for us among humanity. Therefore, it is not worth suffering people that cannot have a harmonious relationship or friendship with us. In the same way, it is useless to spend a lot of effort attempting to

amend a dysfunctional relationship or friendship when there are a lot of people with whom we can have good-quality relationships or friendships without so much effort.

Catalina got naked to expose herself while being drunk. According to Jana the Refulgent, it is all right for girls to show off the beauty of their bodies in public. Jana the Refulgent always wore short and revealing clothes, especially because that was fashionable in the early 2000s. However, Y2K fashion also allowed options for girls to cover more of their bodies. Nevertheless, Jana the Refulgent chose the sexiest outfits that were sold at that time. Jana the Refulgent showed off her body in public to everyone because she knew she was hot, not simply because she accepted herself as she was. In fact, she was not a person who accepted herself as she was, because she loved to improve herself continuously. To improve her body, she followed a daily workout routine and stuck to a strict diet plan. To improve her mind every day, she studied arduously. Once she knew that she was the most excellent possible person that she could be thanks to her own efforts, then she accepted herself. She accepted herself if and only if she was the result of her own rational ideas and her personal work, because only then did she know that she was her own product, not the product of outside social forces that controlled her. To fully accept ourselves, first we need to endeavor to be what we want to be. A nice-looking girl ought to show off her body because of the pride of knowing that it is the product of her effort to keep it attractive.

When I was told at the University of Cambridge that I needed to study more school years to apply to university, I was sad because I thought that all my efforts while studying high school in Mexico were useless. Nonetheless, I should not have been sad since, according to the doctrines of Jana the Refulgent, studying is something good because it allows us to change. Not only does our brain change physically by creating new neuronal connections, but also our worldview changes for good. That is because it allows us to know more, and to have a broader criterion for the Universe and nature. As a matter of fact, I should have been joyous because I would have the opportunity to know more stuff—hence, to be able to edify myself as an individual by knowing myself more, by knowing more about society, and by knowing more about the world. According to Jana the Refulgent, there is never an excess of education. Education is the greatest blessing for any person.

Learning about science was, according to Jana the Refulgent, the best benefit for one's life. An example of this is what happened when a Chinese guy was sneezing and suffering from a runny nose when he infected me with an influenza virus. An ignorant person who does not know about

science, as I was at that time, would not fear that Chinese lad. Whoever knows about science knows the infection mechanisms of pathogenic bacteria and viruses. Thus, a person having scientific literacy would not have approached the infected guy. Whomever does not know keeps being close to the ill chap and ends up becoming a victim and prey to the pathogenic agents. Many times, life treats us badly and we blame the Deities, destiny, karma, or other people for what we suffer. However, very frequently, the true source of our suffering is our ignorance about science. Plenty of the situations that harm us are avoidable if we know the mechanisms that underlie the workings of the Universe. In that way, in many situations, we can anticipate a bad outcome, and we can run away from it.

Jana the Refulgent said that we ought to live life traveling as much as possible to different places and having the largest number of possible experiences. These experiences include visiting any tourist attraction, practicing any activity that we can join, and living the greatest number of possible situations, having different roles in the theatrical drama that is life. That is why it is good that I participated in a bird count competition. It is always good to watch birds differently and to do whatever activities we usually do differently. This is because, for Jana the Refulgent, it is an artistic aim in life to achieve a significant neuronal complexity. That can be accomplished by creating a lot of neuronal connections within our brains by learning a lot and doing many different activities. Our brain cortex is our work of art that we keep building on every day by making new neuronal connections. Living a life full of experiences and varied types of knowledge allows us to create complex neuronal connections. It creates an extremely branched brain cell architecture. Our brain becomes like a forest of dendrites and synapses within ourselves. Our brain becomes a beautiful and gorgeous work of art that is reflected in a life that is worth living. That is why Jana the Refulgent traveled to a lot of different places all over the world. She spent all that time meeting a lot of different people and learning as much as possible.

The zoonosis caused by the severe acute respiratory syndrome coronavirus (SARS-CoV) in November 2002 shows that humankind is always menaced by health risks. Health was exceedingly important for Jana the Refulgent. The reason is that for her, part of the art of behaving suitably during everyday life includes having a lot of discipline. This discipline would be very difficult to achieve if one is ill. Illnesses limit a lot of human capabilities. That is why Jana the Refulgent always wanted to take care of her health and the health of the persons she loved. That is why she always kept a tiny bottle of antiseptic gel in her bag. She wanted to be able to clean her hands in case

there was no lavatory to wash her hands. Health was something essential for her. She thought that part of what makes a person wise is the ability to choose options in life that would maximize physical health. Moreover, mental health is intrinsically linked to physical health.

Also important to Jana was diligence. My tutor Ken Martin and Tom did not work because they did not love their jobs. To motivate me to be a hardworking student, Jana the Refulgent made me fall in love with my duties. The desire to progress and to live a fulfilling life that Jana the Refulgent instilled in me necessarily entailed that I would start to perceive my duties as an opportunity to improve myself every day of my life. Living like that allows us to work harder to perfect ourselves. In that type of situation, our everyday job or the tasks that we must perform become opportunities to improve us holistically. All actions that involve our own work when it is done in the best possible way are activities that improve us. All activities that improve us are actions that we must love. Therefore, all actions that involve our own work when it is done in the best possible way are actions that we must love.

I benefited a lot from the books of Homeric poetry that were given to my grandfather Tomás by order of President Plutarco Elías Calles as part of the experiment of the Casa del Estudiante Indígena. The reason was that by learning from them how to openly express my emotions, both with spoken words and with written letters, they gave me the most valuable key for social interaction. According to Jana the Refulgent, the correct display of one's emotions is essential to be able to create emotional ties with other people. It is by sharing passionate emotions that members of a crowd end up feeling as part of the same integrated group. It is by declaring one's love for someone in a less inhibited way that we can create a lasting emotional bond. Expressing our emotions openly requires a lot of courage. However, it is good because it connects the individual with the rest of the world. In that way, the individual stops being isolated. When that happens to us, we stop being only one being to increase the span of our cognitive and emotional identity over all the people we love. We cannot say anymore that "I am." What we would then say is that "we are." Indeed, we are not only ourselves. We are the result of the worldview of all the people that surround us. They affect the way we look at reality. They become part of us. In this way, Jana the Refulgent became part of me.

Jana the Refulgent was ready to help me to undergo social integration in my new school and to help me to get good grades as soon as she saw I was alone and that I needed help. It was thanks to all the love that she gave me that she saved me. She allowed me to keep going in my new environment. Jana the Refulgent considered that, in that way, love

can protect and empower people. Jana the Refulgent took care of me and nurtured me because she loved me. Love is like the rainwater that the sky Deities send so plants can grow in the ground. In the same way that plants need water (H_2O) to grow, people need love to be better people each day.

I do not mean that to get this love we need a person like Jana the Refulgent that would take care of us. We can love ourselves by taking care of ourselves by acting in ways that make us better people. People like Jana the Refulgent are a blessing for this world, but they are very scarce. If we do not find someone like her, we can always work to become like her so we can become a blessing for this world. The kind of love that is like the rainwater that allows plants to grow is not something that we can only give to ourselves or to other individuals that we may choose. This type of love can be given to a whole civilization. That was the highest possible ideal of Jana the Refulgent when she considered that our intellectual contributions might change entire societies to improve them.

All the recommendations that she gave me to attain success in life were the result of having been tested by herself in real life. That is very important. Empiricism was one of the central doctrines of Jana the Refulgent. Jana the Refulgent, as Aristotle in his treatise "On the Soul," thought that faith is not enough to obtain knowledge—that we should not believe in a doctrine only because it sounds good. To know if it is truly suitable for us or even if it works at all, we need to test it. Logical consistency should not be the only requirement to do something. We need to demonstrate that it works in the real world. That should be true for most doctrines, either ethical, religious, or political. That is why it is important to test every doctrine before believing in it or loving it.

The love I felt for Jana the Refulgent was a neurological process going on in my brain. It was a mere evolutionary adaptation that allows humans to sexually reproduce. However, Jana the Refulgent knew how to humanize this natural phenomenon and transform it into an idyllic romance. Indeed, in the same way as Jana the Refulgent, we need to make use of what already exists in nature and transform it into something greater and nobler. I do not only mean in nature as it exists outside of us, but also everything that is part of our inner nature.

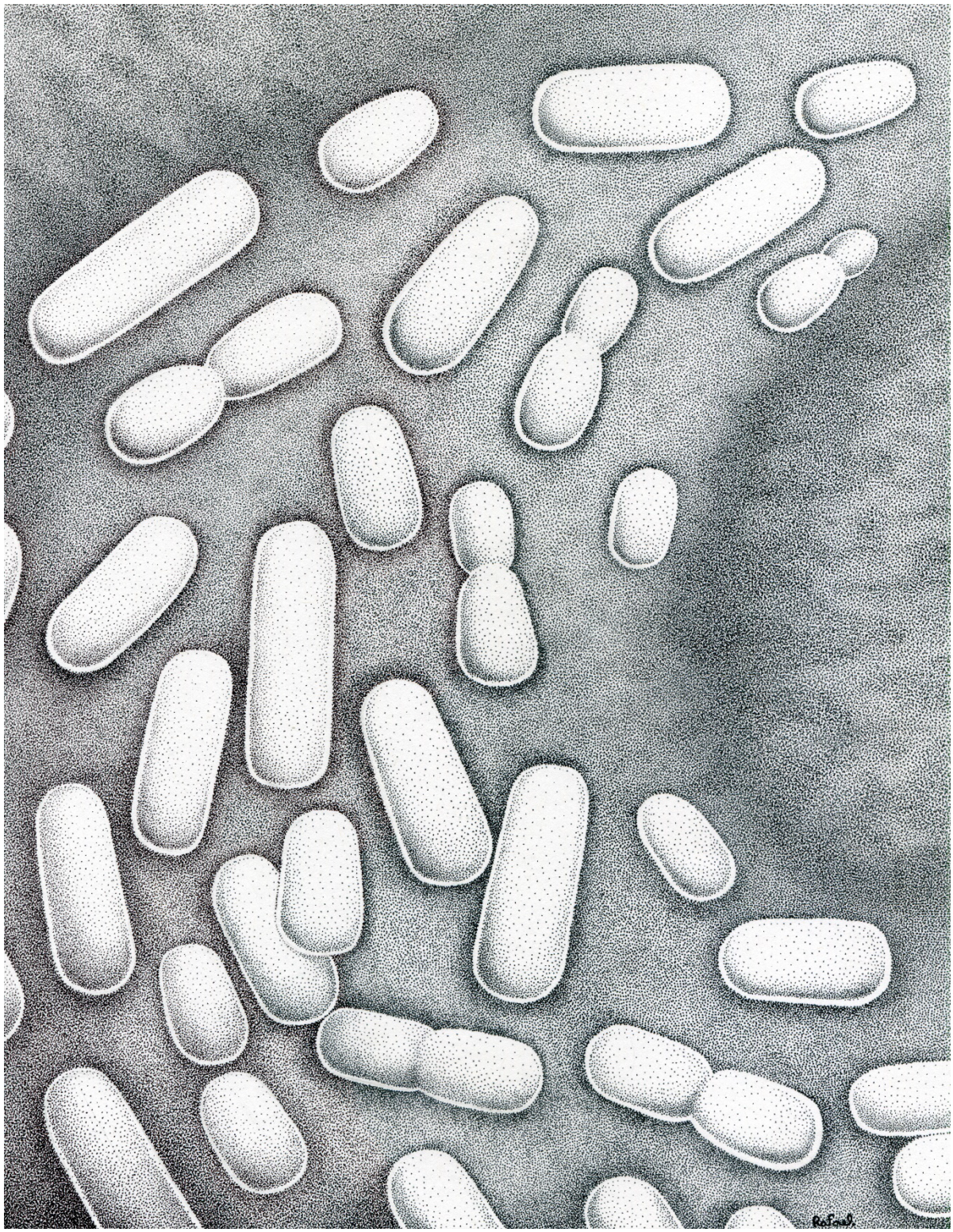
CHAPTER 15. *HAEMOPHILUS INFLUENZAE*

On Monday the 14th of April 2003, the scientific teams in charge of sequencing the human genome finished their task. It was not the first whole genome of a cellular organism to be sequenced. The first one was sequenced in 1995 and belonged to the bacterium *Haemophilus influenzae*. However, the human genome was highly promising. The reason was that, as epigenetics was not as developed at that time as it is today, genetic determinists believed that absolutely everything about a person could be known by simply studying the genome of that individual. Of course, we did not realize that such a task is impossible before sequencing the full human genome. As a result of the human genome project, better sequencing technologies were created, and new software was developed to analyze the sequences of deoxyribonucleic acid (DNA). These technological improvements allowed us to realize that not everything about a person is within the genes. (If you want to know more about predicting whole phenotypes from genomic sequences, please read my bachelor's degree dissertation that I made in 2009 and that is found in Appendix G of this book.)

When the human genome was sequenced, people all over the world were excited. Experts claimed that it was the beginning of a new era in medicine that would allow physicians to cure all infectious and inherited diseases. It was also said that a physician would require little more than the genome of a patient to be able to heal that client. History has taught us that they were false predictions.

The good side of the 2003 genomic hype was that politicians and investors noticed that molecular biology existed and invested enormous amounts of money in research projects. The outcome was indeed beneficial for humanity as it revolutionized human medicine, veterinary medicine, and agriculture. If you want to read about the human genome project, please see the paper by Venter et al. (2001) that is titled "The Sequence of the Human Genome." It was published in "Science" 291(5507): 1304–1351. When Jana the Refulgent knew about the publication of the whole human genome sequence and all the bombastic statements said by politicians and media outlets, she rejoiced that I was going to study biology at university. She then considered that training me to be a better student would be not only good for both of us, but also a tiny contribution from both of us to benefit humankind.

If one wants to benefit humankind, we ought not to be a mere sheep that follows social movements with previously made ideology so we can simply believe it. An



Haemophilus influenzae **(Lehmann & Neumann, 1896) (Pasteurellales: Pasteurellaceae)**

Illustration made by Rafael Calderón. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 860.**

ideology that is made for us to believe, that ensures we do not think by ourselves, and that is massively distributed only benefits a few politicians or millionaire entrepreneurs. If one wants to truly benefit humankind, one must achieve that by our own individual merits. These merits can only be achieved by wise people that think independently of the masses. What an average person needs to do to change society is to realize that such an aim is possible and to work strenuously to fulfill that dream. By criticizing the masses, I do not attempt to be a classist. Philosopher José Ortega y Gasset (1930) in his book titled "La Rebelión de las Masas" stated that there are equally stupid people among the rich and among the poor. I agree with him. The person with a truly enlightened mind is a rational thinker regardless of the social class of that lover of wisdom.

Jana the Refulgent was loving, motherly, and at the same time, a sexy girl. Being sexy was what made her famous in all my school. Therefore, soon plenty of students started to speak about me because I spent a lot of time with Jana the Refulgent. Everyone said that I was in love with her. They were right. I loved her a lot. I greatly loved her legs, her midriff, her belly button, and the beauty of her soul. I always used to go visit her at her flat, especially when I was sad, or I required advice (52.214404061583394, 0.12017197932386385). I went inside her bedroom, and she always gave me guidance and love. After having spent time with her, I always left her apartment with a smile on my face. I truly liked visiting her in her bedroom, because when she was there, she was only wearing her bra and her panties.

Moreover, she is one of the girls with the most beautiful body that I have ever seen, because she loved keeping fit by working out every day. Jana the Refulgent was better looking than most girls and young women that are hired for their beauty to work in Hollywood or in television shows. She was the girl with the most sexually attractive legs that I have ever seen in all my life. I was able to memorize how the legs of Jana the Refulgent looked. I remembered them so well that I was able to tell her legs apart from the legs of all the other girls at my school. When Jana the Refulgent was wearing a miniskirt, she never wore pantyhose, tights, or stockings. She always displayed her fully bared legs in all their majesty. When Jana the Refulgent was inside her bedroom, her feet were totally bare. Frequently, Jana the Refulgent was barefoot. Even during winter, she wore sandals that allowed her to display the skin of her feet and her toes. Her feet were delicate and shapely.

In the bedroom where Jana the Refulgent lived, there were some stars, and a moon made of plastic pasted on the ceiling. They were painted with strontium aluminate doped with europium and dysprosium ($SrAl_2O_4:Eu^{2+}, Dy^{3+}$). Hence, the stars and the moon shined when the lights were

turned off during the night and early morning. Jana the Refulgent had plenty of soft toys. They were teddy bears and other plush animals. All of them had their own given names in Czech. She loved to hug them tenderly. As a result of that, she did not suffer from the kind of nostalgia that I had every time I remembered Camilo, my childhood's favorite toy.

There were two paintings hanging in her bedroom. One of them depicted a cat (*Felis catus*); the other one depicted a Hawaii oo (*Moho nobilis*), an extinct bird species. Jana the Refulgent kept a potpourri with *Rosa* petals inside her bedroom so it would always smell good. It always smelled like roses. To reach the bedroom of Jana the Refulgent, I had to walk across a park known as Jesus Green. Then I had to walk over Jesus Lock Footbridge. It is a bridge that is over River Cam. Then I walked at the edge of Alexandra Gardens, a lovely park. Thus, it was an idyllic path.

Events on a global scale impacted the school as well. China's government was authoritarian, so it had strict control over Chinese citizens and all their activities. Furthermore, they did not follow the same political system as Western democracies such as the European Union and the United States of America. Due to their laws, China became a world leader in the manufacturing of products for companies from several countries. It was also a proficient low-cost producer of almost all imaginable products. Therefore, China became an extremely rich country. Even almost as wealthy as the United States of America. As there were numerous affluent Chinese entrepreneurs, they could afford sending their children to the United Kingdom to be educated there. The United Kingdom and the United States of America had the reputation of having the best educational institutions in all the world. Moreover, in the 2000s, The United States of America and Western Europe were the world leaders in science and engineering. Hence, in 2003 there was a huge number of Chinese students enrolled in the private schools of England.

In my chemistry class, all my classmates were Chinese. The Chinese students studying abroad were often the most intelligent and hardworking students from China. Not all of them were sent by their parents. Many of them were sent by the Chinese government to the United Kingdom, so they would learn about its teaching strategies, its science, and its technology. In this way they could improve China's scientific and technological level.

Almost all male students in my school were sexually attracted to Jana the Refulgent. As Jana the Refulgent had a reputation for being hot, many persons envied me, and others hated me because of all her attentions toward me. One day, I bought a flower that belonged to a species of orchid from the genus *Phalaenopsis* to give as a gift to Jana the Refulgent. I waited outside the

classroom where she was having a history class together with her classmates. As soon as the class ended, I gave the flower to her. Tatiana, the flatmate of Jana the Refulgent, approached me the next day together with another lass. Then she said to me: "I would like to introduce you to my friend Lisa. She would be an excellent girlfriend for you! You can buy her flowers, go out with her to Cambridge University Botanic Garden, and love her."

Something else that happened was that Xiao Deng, my classmate, enjoyed bullying me because according to her, Jana the Refulgent only liked me as if I were her brother, while I was in love with her. I never said in class or privately to her that I wanted Jana the Refulgent to be my girlfriend. Nonetheless, Xiao Deng bullied me.

A boy named Casper laughed at me while saying that Jana the Refulgent was going to slap me in the face and reject me for attempting to become her boyfriend. Georgina Pedrick, my teacher of English, also bullied me regarding Jana the Refulgent by saying she would never be my girlfriend and attempting to show me how worthless I was, so I did not deserve her. Guo Wang, one of Georgina Pedrick's pupils, told me all the time that Jana the Refulgent was a difficult girl—therefore I should resign myself to not becoming her boyfriend, but that I should not worry, as there were too many other girls that I could bed. All the bullying that I endured at that time was because too many persons envied me. Most of them wished they had the attentions of Jana the Refulgent as I had.

In fact, Jana the Refulgent was more than a girlfriend. Jana the Refulgent gave me more than any of my significant others because she taught me guidelines to live life that I have kept using throughout my life. She did not just give me a friendship and a sexual relationship as an average girlfriend does. That type of friendship and sexual relationship provided by any random average girl can be substituted with the friendship and sexual relationship with any other girl at any other time during life. In that sense, Jana the Refulgent was special.

I was indeed captivated by her. I was deeply in love with her and thought about her every day. Just thinking about her made me feel immensely euphoric. I felt highly excited just by looking at her. Jana the Refulgent always knew what I thought about her and how much I loved her. As a matter of fact, I spent all the time complimenting her erotic and sultry body. Something strange about Jana the Refulgent is that she knew how to fake orgasms when she had sex. She did not do that only while having sex. She moaned with pleasure after apparently having a laughing orgasm every time I caressed her and kissed her passionately while I told her what I thought about her. She taught me not to behave in an inhibited way in front of girls and how to stop feeling ashamed of saying how I felt for

her. She knew that I was sexually attracted to her and thanked me for my desire.

Now I shall address the criticism by all the persons who bullied me. They harried me with speculations about whether I wanted Jana the Refulgent to be my girlfriend or not and with speculations regarding whether I thought Jana the Refulgent was my girlfriend or not. The truth was that I never needed Jana the Refulgent to be my girlfriend. She gave me all the sexual pleasure that I needed. Moreover, as she was not my girlfriend, I was free to look for other girls to sexually satisfy me if I would have wanted that. My relationship with her entailed having all her support, love, eroticism, and sexuality without any commitment. In fact, she allowed me to enjoy her youthful body that was full of angelic beauty and at the same time gave me advice to find a lover if I would have wanted to get one.

The only aim of Jana the Refulgent was that I would get the best in life without getting anything in exchange. I wrote love poems to Jana the Refulgent using the literary skills that were taught to me by Mariana, El Zambo, and Saldaña. She pasted all my handwritten love letters on the walls of her bedroom to be able to read them all the time. Every time we were together, she flattered me by saying I was handsome.

My favorite hobby at that time was watching birds. The place I loved the most for birding was Cley Marshes, England. It was the closest place to me with the largest diversity of birds. It included the following habitats: sea, beach, and obviously marshes. In Cley Marshes I saw beautiful birds such as the common shelduck (*Tadorna tadorna*), the common eider (*Somateria mollissima*), and the northern lapwing (*Vanellus vanellus*). However, as I was attempting to watch all the resident and migratory birds of Great Britain, I also visited other places to watch birds.

Once I went to Thetford Forest, England, a woodland full of small Chinese deer that are known as Reeves's muntjacs (*Muntiacus reevesi*). In that place there are several archeological sites. I found an archeological artifact while walking in the woods looking for birds...

Jana the Refulgent was genuinely concerned for my well-being and for my success in life. Unlike Emilio the Sage, she did not think the most important part of life was the supernatural, miracles, or ascetic practices. Jana the Refulgent thought that the most important part of life was attaining success by fulfilling our dreams. Philosophy for her was not a key to access divinity. It was a key to fulfilling our everyday life goals. She was thus by far more practical than Emilio the Sage. As part of her focus on practical matters, she had absolute faith in science. Nevertheless, she was interested in New Age philosophy regarding personal development. Jana the Refulgent lent me short books so I would read them. In that

way, she also tutored me using texts that she thought could be beneficial for me. Jana the Refulgent thought that I could be far more than what I thought I was. The only requirement for that would be getting rid of my self-limiting beliefs and working hard to obtain what I wanted. Regarding ethical matters, Jana the Refulgent was not looking for ethical perfection as Emilio the Sage. She thought that one must have success in life and to attain it, one needs to do all that would be needed to get it. This, of course, should be done without harming others a lot to get what we want—according to her, harming others, only a little, is okay.

She was a consequentialist, but not a utilitarianist. Her ideas were closer to following the old-style consequentialism of Machiavelli (1532), that he discussed in his book titled "Il Principe." According to Jana the Refulgent, following social norms is fine if they benefit you as an individual. If social norms do not benefit you, the individual should always have priority over the whole society. Therefore, it is eminently important to devise our own personal, individual norms that would be above those norms that are culturally more accepted. Widely accepted cultural norms tend to be utilitarian or in favor of human dignity. Hence, they do not universally benefit the individual. Nonetheless, Jana the Refulgent did not believe in philosopher Ayn Rand's ethical egoism because Jana the Refulgent considered helping others for altruistic reasons to be good. However, helping others for altruistic reasons must not be compulsory, and it should be done if and only if such behavior would not reduce our probability of success. If you want to know about ethical egoism, you should read the book by Rand (1964) titled "The Virtue of Selfishness: a new concept of egoism."

Jana the Refulgent disagreed with Emilio the Sage in the belief that he had stated that all ethics ought to be based on a single principle: religious holiness. According to Emilio the Sage, all behaviors must be the result of the state of having religious holiness. This view outlined by Emilio the Sage was a typical virtue ethics theory. To her, however, moral behavior should be based on a series of diverse norms that do not necessarily have a unified, common principle. Nevertheless, they allow us to have a suitable behavior for daily life.

At first glance, it seems Jana the Refulgent was suggesting a similar moral theory to the one by my former schoolteacher Adriana the pervert, by not looking for the ethically perfect personality that was preached by Emilio the Sage. However, Jana the Refulgent preached something vastly different to what Adriana was saying. Adriana, like Emilio the Sage, had a virtue ethics theory. This means that she wanted to change the personality of the individual, not the moral actions of the individual. The moral behaviors of the individual were a secondary effect because of the change in

personality (i.e., Emilio the Sage was looking for holiness, so all moral behaviors were the result of having a holy personality. Adriana was looking for something that she called "maturity," so all moral behaviors were the result of having a mature personality).

According to Jana the Refulgent, moral actions and behaviors were the important part of moral life. She did not pay attention to the personality of the moral agents. Furthermore, Jana the Refulgent, like Emilio the Sage, was focused on the eudaimonia. Emilio the Sage looked for eudaimonia through virtue ethics by modifying the personality and the way of living of the moral agent. On the other hand, Jana the Refulgent wanted to look for eudaimonia through individual moral actions. Both were different paths toward the same telos. From the point of view of the ethical telos, Adriana was not looking for eudaimonia but for the moral and physical self-destruction of the individual. That is the most opposite outcome to what Emilio the Sage and Jana the Refulgent wanted. The gray paths that were not black or white, which Adriana preached as the best possible options, were paths toward self-destruction.

The ethical paradigm of Jana the Refulgent did not involve divine or demoniac intervention over human fates. In that way, it differed from the theory of Emilio the Sage. Thus, I will now reformulate under the new paradigm an explanation on why Jorge Reyes Mejía and Enríquez failed. According to Jana the Refulgent, the utilitarian ethics suggested by philosopher Jeremy Bentham and the ethics based on human dignity suggested by philosopher Immanuel Kant benefit society by harming the individual's eudaimonia. You can read Bentham's theory in his book titled "A Fragment on Government" (1776). You can read Kant's theory in his book titled "Grundlegung zur Metaphysik der Sitten" (1785).

Utilitarianism harms the individual by benefiting most people without considering the effects that it may have on an individual within the whole group. Believing in human dignity, as the Kantian categorical imperative states, harms the individual by limiting the paths toward success by not allowing such an individual to damage other people to achieve important aims. Other prosocial systems of ethics also harm the individual as much as utilitarianism and the categorical imperative. Our parents and the society where we were born have essential traditions and knowledge to keep the social order. That is why it is taught to us that we ought to obey our parents in whatever they tell us, as that keeps the social order. This commandment benefits society, but it can harm the individual as when Jorge Reyes Mejía harmed himself complying with the request of Lorenza when she asked him to marry Esperanza.

Economic competition benefits the economy of nation-states. If there are more firms attempting to maximize their earnings, there is more national wealth to benefit society. However, it does not necessarily benefit the individual because an excess of love for money above any other principle can lead humans to failure, as it did to Enríquez. Paradoxically, even if Jana the Refulgent did not believe in supernatural demonic forces, the solution based on her paradigm to avoid the troubles suffered by Jorge Reyes Mejía and Enríquez is the same as the solution based on the paradigm of Emilio the Sage. This solution entails thinking by ourselves about what we want and not just following what society or people with authority tell us to do. This solution involves reaching our decisions after a well-structured reasoning based on a solid, logical education... It is a mistake to blame a victim. That is a cognitive bias known as the "just-world hypothesis." Nonetheless, it is indeed good to attempt to identify the possible mistakes of Jorge Reyes Mejía and Enríquez for the sake of avoiding such ills.

In my biology class, our schoolteacher Anita Chatterjee tasked us to do laboratory practical work that was a kind of examination. The written report would be sent to the examination board Edexcel so they would mark it as part of the total grade. The practical work was based on the chemical phenomenon that an aqueous solution of iodine (I_2) with potassium iodide (KI) generates polyiodide anions that interact with starch (amylose & amylopectin) to produce a noticeable blue color. The practical work was about measuring a reaction rate.

We needed to measure the hydrolysis of maize (*Zea mays*) starch to dextrins, oligosaccharides, and maltose. This chemical reaction was catalyzed by the enzyme α-amylase (1,4-α-D-glucan glucanohydrolase) that was originally obtained from the bacterium *Bacillus licheniformis*. We added starch and α-amylase. At consecutive times, we added the solution of iodine and potassium iodide and then measured the intensity of blue color in a spectrophotometer. The intensity of blue color was directly proportional to the amount of starch. In the written report, we were required to plot a graph of blue color intensity against time. In that way, we would indirectly measure the starch hydrolysis rate. The written report had to be extremely detailed. Strangely, this laboratory practical work was also performed previously by Jana the Refulgent when she also studied AS biology.

Jana the Refulgent loved social utopias a lot. She frequently thought about several ways of organizing the government of small communities, city-states, or nation-states. She hypothesized possible laws or institutions and then she thought about the consequences of their existence. She never

thought about a utopia that was more prominent than her other alternatives. She frequently modified them and started everything again from zero. During Easter 2003, I was already well adjusted to my new life. I had already finished my great transition. "The Journey" was finished. Jana the Refulgent is the maiden of "the Journey." That is why she is depicted holding a mushroom that belongs to the species *Psilocybe caerulescens*. That is her attribute. This mushroom is the symbol of "the Journey."

Moreover, it is a medicinal fungus among Indigenous Peoples of Mexico. Jana the Refulgent can be considered as a physician of the soul, as were sophist Socrates the Elder, and his successor (philosopher Diogenes of Sinope) during Classical Greek times. It was relatively easy for me to accept Jana the Refulgent as my teacher. That was because Emilio the Sage taught me to mistrust my schoolteachers whose authority emanated from governmental power or from people with lots of money. Jana the Refulgent was not a schoolteacher, and she did not get any money for teaching me. She taught me for free using her own free will without getting any benefit. Therefore, under the paradigm of Emilio the Sage, she was the perfect person to be my guide and to have more authority over me than any formal schoolteacher from my school. In that way, I idealized and started to worship scholarch Jana the Refulgent, the great adept philosopher that was kind and generous.

Emilio the Sage and Jana the Refulgent were hugely different kinds of teachers for me. Emilio the Sage was like a wise saint, divinely inspired, that gave me his secret wisdom from his throne of majesty. Jana the Refulgent was more approachable. There was not anything mysterious about her. She never had any mystical experience during her whole life. However, she knew everyday wisdom better than most people and she introduced me to learning about the human beings that surround me. She taught me about girls and how to diminish my shyness by allowing me to love her without fear of being rejected. We loved each other with a lot of tenderness and mutual respect. As a result of that, I did not just worship her because she was an adept philosopher. My adoration toward her was also focused on her vaginal and umbilical female sexuality. I indeed revered her physical beauty. Such veneration was a mixture of carnal pleasure with spiritual devotion.

What I felt for Jana the Refulgent was similar to what the initiates of the Roman mysteries of Isis thought was the relationship between Isis and Osiris the Khenti-Amentiu. They thought they were mother and son and lovers at the same time. In the religion of Pharaonic Egypt, Isis and Osiris were only lovers—they were not mother and son. The Romans thought about them in that way because they

syncretized their love story with that of the Great Mother Cybele and Attis. They were both mother and son and lovers. As my philosophy teacher, Jana the Refulgent was like a mother for me, who took care of me and raised me. As the girl that erotically seduced me and that I lusted after, Jana the Refulgent was my redeemer that brought me back to life by allowing me to drink ambrosia and soma by loving me.

Before saying goodbye to me at the end of the school year, Jana the Refulgent told me that if, for any reason, I would need her in the future, she would help me. After our farewell on the last day of classes, I wept bitterly. I was crying throughout the afternoon and during the nighttime of that day because Jana the Refulgent graduated, and I would not see her anymore. I wept a lot for her because I had never before met a girl with such a sexually attractive body, with such a gorgeous face, and with such a kind heart.

At the end of all academic years, the Cambridge School of Visual & Performing Arts organized a fashion show where my female classmates displayed the outfits that they designed by wearing them by themselves or by giving them to their female friends to wear. However, the main aim of this fashion show was an opportunity for the girls to publicly show off their bodies while being barely dressed to feel sexy, beautiful, and powerful. Most of the girls walking in the runway were scantily clad. They showed off their bare legs, bellies, navels, and part of their breasts. The models did not walk in the way professional fashion models walk. They walked erotically to show off their voluptuous bodies. These fashion shows were a sexually exciting experience. As most designers and models were Russian, they played Russian classical music while walking the catwalk. (To listen to this type of music, please listen to "Lebedínoye ózero, opus 20" by Tchaikovsky (1876).)

In my school, I met a girl whose name was Nadine, who was studying at the Cambridge School of Visual & Performing Arts (the same part of my school that organized the fashion show). She loved photography. She had the mantra om written in Devanagari script tattooed on the back of her neck because she claimed to be a Buddhist. When I started to spend time with her, Jana the Refulgent congratulated me because I was already making new friends. Nadine and I agreed to go together to watch a movie at a cinema theater. However, Nadine never turned up. She stood me up... She only made the appointment to make me feel miserable. The reason was that Nadine hated men. She disliked the fact that she was born a girl because she was a lesbian. Moreover, she liked stuff that society associated with the masculine gender role. As she grew up like that, she started to hate boys because she was not one of them. Her hatred against

guys became even more vicious when her female sexual partner left her for a boy named Paolo. Therefore, she wanted to take revenge on all lads because she was not one of them and because most girls preferred them. As I was a lad, she wanted to make me feel bad.

At the end of the academic year, I was a bit sad because of the way Nadine behaved with me. To overcome my sadness, I contacted Julia by email (electronic mail). She was the Austrian gal that I met in Saffron Walden. I asked her whether I could meet her in person in her country after the last day of classes and she accepted.

As Julia had the utmost beautiful facial features and golden hair, I was very happy to have a date with her. The following two weeks after the academic year ended, I was gleeful because I would travel abroad to visit Julia. I do not know why, but having a date abroad is by far more exciting than just going out within one's city. No previous weeks in my entire life were as blissful as the two weeks I waited for meeting Julia. Not only did thinking about the beauty of Julia keep me ecstatic, but also that I did not know how our meeting would be.

Furthermore, as during those two weeks I was on holidays, I spent every day sightseeing in London. I visited the National Gallery, London. There, my favorite works of art were "Vergine delle Rocce" by Leonardo da Vinci and "Venus mit Amor als Honigdieb" by Lucas Cranach the Elder. In Hampton Court Palace I visited the oldest hedge (*Taxus baccata*) maze in the United Kingdom. It is like the mazes of the Porteus maze test that psychologist Núria made me solve, but this was not a tiny maze printed on a sheet of paper. I was able to walk within the maze!

Finally, that July 2003, I traveled to Vienna, Austria. It was my first holiday tour without my parents because all my previous unaccompanied journeys had purely educational aims. Moreover, it was my first tour to a European country other than the United Kingdom! The afternoon and the night before meeting Julia were the most elated and euphoric of all my life! My joy was reinforced by being in a new place and by the majestic architecture of the city center! Julia greeted me happily and we walked in the streets of Vienna. She explained to me what every building was as if she were a tourist guide. We ate together at midday in the city center of Vienna. During the afternoon, we went to an open-air café in Schonbrünner Schlosspark. We said goodbye to each other in an extremely loving way in the Hietzing station of the underground subway rapid transit. After my Vienna tour, Julia became my cybergirlfriend. I had a relationship with her using the Internet. It is like playing that one has a girlfriend, but not having her in real life because everything happened online.

After visiting Vienna, I went to Berlin, Germany to meet two of my friends from Mexico named Hirsch and Rodrigo Ávila. Rodrigo risked his life by riding his bicycle in Berlin between the cars in the most important avenues. He played with the moving cars in a dangerous and irresponsible way. He claimed that the adrenaline rush produced by being in a life-threatening scenario was so exciting. He begged me to please follow him to play the same suicidal games he was playing, but I did not accept that. I was too afraid of what he was doing.

Hirsch changed radically that year. Now he hated science. That was weird because he loved it just the year before. Furthermore, he was now a drug addict. That was not weird, as he was a student at the same school where I was once enrolled while living in Mexico. That school was the most nefarious, unholy, and evil place I had ever been. The reason why Hirsch traveled to Europe was because he wanted to taste all the products with psychoactive recreational drugs that were sold in the Amsterdam coffeeshops and smartshops. At that time, there were not as many restrictions as there are now. A greater variety of drugs were sold, and any tourist could take drugs there that were banned in other European countries. During nights, Rodrigo and Hirsch asked me to go with them to watch prostitutes that were streetwalkers in Berlin. I agreed to go with them. Hirsch asked us to please hire some prostitutes. Nevertheless, I rejected his request because such sex workers may have plenty of sexually transmitted infections. We then visited the ruins of the Berlin Wall that divided the city during the Cold War. Rodrigo and Hirsch did not share many common interests with me, but it was nice spending time with them in a different city. That summer was bright and beautiful...

When the academic year 2003–2004 started, I noticed that schoolteacher Georgina Pedrick was fired. I was happy about that because she used to bully me. She was replaced by an Australian schoolteacher named Janice Hinckfuss. She, on the other hand, was a good teacher.

The school subject that I remember as the best one and that I loved a lot was chemistry. Philip Thompson, my chemistry teacher, was excellent. He taught me to truly love laboratory classes. I can remember how fascinating it was to learn chemistry under his tutelage. He did not teach chemistry by just asking us to write down boring stoichiometric equations in our notebooks. He showed us spectacular chemical reactions in the laboratory classes. These reactions were unlike anything else I had ever seen. Philip Thompson told me that he thought that I had a passion for chemistry.

When Jana the Refulgent told me to look for friends among my classmates, she also asked me to befriend Philip Thompson. I followed her advice. He was a very good

man. He was so good that Zhao, one of my classmates, thought that he was like Jesus, the founder of Christianity. With Mario Wilson, my mathematics teacher, I learned for the first time to do mathematics. Indeed, my Mexican education was unsuccessful as I was never able to learn math there.

Some of my best friends were Nils Petri and Yang Jingjie. Nils was a jolly and funny boy. Jingjie was a very studious girl that always got excellent grades. She called me by telephone every night to briefly chat with me and to wish me good night. Jingjie was a shy girl and wore glasses. She had a slim body that was at the same time curvaceous and voluptuous. Her body had an hourglass figure because she had a slim waist and thick hips. She had rounded, erotically attractive buttocks. She had a flat stomach and a lovely outie belly button. Her body was very hot.

I had another classmate, Judith, who sat close to me in my biology classes. She was ill from nicotine ($C_{10}H_{14}N_2$) dependence. Every recess, she smoked tobacco (*Nicotiana tabacum*) cigarettes. When classes lasted two hours, she asked schoolteacher Anita Chatterjee to please allow her to go out of the classroom to smoke a cigarette during the middle of the class. Even if she was not smoking, she smelled like burnt tobacco if one came close to her.

A girl that got on well with me lived in Tom's house. She was my housemate. Her name was Ithaka Roddam. She was an introverted girl. She was thin and blue-eyed. She always was homeschooled so that was the first time she took classes in a school with plenty of classmates. She loved photography and that is what she ended up doing professionally.

In my school there was a student whose name was Alexandra. She had a striking tattoo—it was found from the back of her neck to above her buttocks. The subject of her tattoo was a black Chinese dragon that was extremely long. It was so long that even though it was so big, its body was curved in many loops. Tattoos are paintings made over the human skin by harming the integument by inserting pigments subcutaneously. They tend to be painful, but people willfully commission artists to make them. It is a form of aesthetic enhancement. It is a bit like pasting stickers on cars or making mural paintings on the walls of buildings.

At that time, something peculiar happened. A Swiss girl had sex with five guys during a party. After she stopped having sex with a lad, she immediately started to have sex with the next one. She did not put on her clothes between each round of coitus. She kept being totally naked, having sex. She did this in public in front of all the partygoers. When a guy felt sexually aroused from seeing the nude Swiss girl having sex in public, he only needed to take off his clothes to start having sex with this sexually

unsatiable and uninhibited exhibitionist girl once the previous lad stopped having sex with her. This girl and all the guys with whom she had sex were my schoolmates. I was surprised that a human being was able to have so much sex. That seemed to me an extraordinary feat and something that was worth telling everyone in all my classes.

After I told everyone about what happened at the party, a girl named Tini told me the following: "Please tell me what you want to eat. I will purchase it for you." I asked her to buy a chocolate bar for me and she bought it for me. Tini told me that she bought the chocolate bar to thank me. The reason was that her former boyfriend (with whom she broke up the same week that she bought the chocolate for me) was one of the guys who had sex with the Swiss girl. Tini endured the emotional pain of having seen her boyfriend having sex with the Swiss girl together with the other four lads. That is why she broke up with him. Tini thought that by publicly telling everyone what the Swiss girl did, I was showing to all that the Swiss behaved as a prostitute. Tini considered that in that way, I was taking revenge on the Swiss, who Tini hated, because according to her, she destroyed her relationship with her boyfriend. I did not dislike the Swiss. I just thought what she did was outstanding, which is why I told that to all the people I knew. The Swiss girl was highly sexual. She greeted me every day by groping my butt but we neither became friends nor had sex.

The chocolate bars such as the one that Tini bought for me are made of fat of palm (*Elaeis guineensis*), flour from wheat (*Triticum aestivum*), sucrose from sugarcane (*Saccharum officinarum*), fat from mango (*Mangifera indica*), fat from the sal tree (*Shorea robusta*), cocoa (*Theobroma cacao*), yeast (*Geotrichum*, *Starmerella, Saccharomyces, Pichia, Saturnispora,* & *Hanseniaspora*), and milk that comes from cows (*Bos taurus*).

During half-term, I went to Paris, France to see the Musée du Louvre, one of the most famous art museums. I traveled by train under the Channel Tunnel. It is a wonder of engineering because the train travels inside a tunnel that is found under the sea! Paris seemed to me a more beautiful city than London. I spent the nights in a hotel in Montmartre. From the window of my room, I could see the Eiffel Tower that during nights was fully covered with shiny lights. My favorite work of art in the Louvre was the legendary sword that was employed in the coronation ceremonies of the kings of France. I also loved the "Mona Lisa" by Da Vinci and a sculpture known as "Les Trois Grâces" by James Pradier (1831).

Around that time, I bought a book titled "Birding on Borrowed Time" by Phoebe Snetsinger (2003). I thought that book was marvelous because it is the autobiography of an extremely rich lady that became a full-time birder. Her only aim in life was to increase the number of bird species in her

life list. Reading that book made me value my own life list a lot. I decided to follow in the footsteps of the lady who wrote the book. Hence, I thought I would do whatever was possible to gather the largest number of sightings of species of birds. Phoebe Snetsinger was notorious for spending extremely large sums of money and risking her health and personal safety to watch more birds. She ignored all the needs of her family and suffered plenty of physical and emotional problems because of birding. All of this does not sound good, and it was not. Regardless, at the time, I thought her self-destruction was heroic and something that should be imitated.

This was, of course, inconsistent with the doctrine of Jana the Refulgent. It was actually the total opposite of what she preached. She thought that the most important assets that we have in life are health and welfare. I preferred to forget the values of Jana the Refulgent rather than stop dreaming to become like Phoebe Snetsinger.

Every year the British celebrate Remembrance Day on the 11th of November. That day, they remember the soldiers who died fighting in World War I, as it is the anniversary of the end of the war which happened on Monday, the 11th of November 1918. World War I was a war in which Serbia, Russia, France, and the United Kingdom fought against Austria-Hungary, Germany, and the Ottoman Empire. It was a very difficult war with plenty of casualties. It was the first horrendous war fought using modern technology. Russia left the war, but the United States of America sided with the allies. The greatest difficulty of the war was defeating Germany—but at the end, it was vanquished. The British celebrate the end of the war by wearing poppy flowers (*Papaver rhoeas*) made of paper.

Around the same time as Remembrance Day, I realized I had an issue. I suppose that due to the use of earphones or some other reason, from autumn 2003, I started to have significant increases in earwax production in my external auditory canals. When I felt that my external auditory canals were blocked, I attempted to get rid of the excess of earwax by scratching them with my fingers. As a result of this, I infected the skin of my external auditory canals with bacteria such as *Staphylococcus aureus* and *Pseudomonas aeruginosa*. After physicians healed my infection and removed the excess earwax, everything got back to normal.

Jurisprudence

Jana the Refulgent was excited because the whole sequence of the human genome was published. This shows that Jana the Refulgent was not only interested in philosophy, but also the natural sciences. A good education requires a deep

understanding of physical and biological sciences. This is not only for pragmatic matters. It is also important to allow us to answer the big questions regarding what reality is, how the Universe works, and why we are here. According to Jana the Refulgent, as we are living in this Universe, it must be our duty to explain the reasons why we are here and how we ended up here. These answers can only be obtained by knowing mathematics and sciences. It is not enough, but also not necessary to study for a science degree at university to know this. Most scientists contribute to the total human knowledge, but they do not benefit themselves intellectually by having a good overall understanding of how the Universe works. They mostly have only a very focused and narrow knowledge of their area of expertise.

Jana the Refulgent thought that it was important for humanity to know about the Universe enough to produce technology that could not only economically benefit a few people but provide a better quality of life for most people. Not only that, she thought it was also important that the individual understands who really is, of what constituent material stuff is made, and the origins of existence. To do this, the individual needs to learn as much mathematics, physical, and biological sciences as possible. Then, and only then, it is possible to attain philosophical knowledge in this life.

Jana the Refulgent was always trying to dispel my self-limiting beliefs. She did that so I could achieve whatever I wanted. Success was very important for Jana the Refulgent. However, she did not have a defined idea regarding what life's success is. Instead, she suggested the following: One is an educated and rational person. One desires what one wants because of one's education and reasoning ability. Once one decides what one wants, it is imperative to do as much as possible to fulfill that aim...

Therefore, the measure of one's success is not related to the popularity one might have. Neither to the money that one has. Neither to the political power that one may have. She believed the measure of our success is within ourselves, and it is related to what we desire. This is not the same as existentialism, as this does not entail that we would assess the meaning of life. This means taking control of what is success for us into our own hands. Once we define "success" by ourselves, other people would stop having power to manipulate us by tempting us with what most people consider success. The reason is that we would have a different and more rational definition of the word "success." In 2003, Jana the Refulgent and I thought that "success" means being able to get into the best possible university to get as much wisdom as possible. We were like the magical King Solomon. God YHWH (Allah) said to prophet Solomon, "ask for whatever you want me to give you."

Solomon chose wisdom above all things! You can read this story in the biblical "Book of Kings."

The main reason why Jana the Refulgent did not follow virtue ethics, but a consequentialist ethical system, is that a person with a virtuous personality has few opportunities for improvement. As humans must adapt to different situations throughout life, we should not be the same always. We ought to change, learn new knowledge, and modify the way we are. Virtuous humans are not adaptable because they always behave correctly. Jana the Refulgent thought that sometimes it is necessary to make mistakes so we can learn from them.

Nevertheless, the virtuous person does not make many mistakes in life because such a saint always behaves correctly. Hence, the virtuous person does not have as many opportunities to grow as a person by learning from everyday mistakes. Jana the Refulgent thought that the moral life of a human being should be like software that has artificial intelligence. Such computer programs perfect themselves through what they learn from experience. These artificial intelligences always end up being better than the computer programs that cannot learn anything new and whose functions are limited. Thus, according to Jana the Refulgent, ethics need to be learned empirically by living life, not just by living following an applied ideological principle of any prestigious author, as is implied in the virtuous life models outlined by the main religious traditions.

Jana the Refulgent was amazed with how biological evolution could produce surprising molecular machines such as the enzyme α-amylase (1,4-α-D-glucan glucanohydrolase). It was exciting for her to see how the Universe is full of processes that organize it as something harmonious. This fact was astonishing for her because the Universe is composed of small parts that behave aimlessly and independently of itself. Indeed, each atom of the enzyme α-amylase has subatomic particles that do not behave as they do to fulfill a specific purpose. Nonetheless, the molecule that is composed of all of them is not aimless. It has a harmonious function within the universal order. This does not occur only with biological evolution. According to her, all laws of the universe are harmonic processes capable of creating order that are based on a submicroscopic aimless world. That is why Jana the Refulgent believed that the Universe was beautiful—it can create order where there is none. This order is created in a totally irrational fashion without any mind directing it, only elegant mathematical laws. In the Universe, the abstract beauty of mathematics is transformed to beauty and order that we can perceive with our human senses.

Nadine hated boys because of all the injustices that she suffered in the unfair

society where she lived, and because she was an envious, resentful person. That is why she made me feel so bad even if I never did anything wrong to her. However, the fact that she was a lesbian, envious, and that she hated males is unimportant. That is because there are also plenty of people that mistreat us even if they do not share any of Nadine's traits or her background. The important fact of my experience with her was not what made her behave like that, but how I need to react if someone behaves that way with me.

There is no reason to suffer mistreatment from a bad person. Firstly, it is worse to start a friendship with a bad person than to be unable to befriend someone as mean as that person. That is because an unkind person can easily ruin our lives. This also applies to romantic relationships because Esperanza ruined the life of my uncle, Jorge Reyes Mejía. Secondly, we should not suffer if a bad person does something mean to us. That is because our social interactions with other people (such as going out together somewhere) are ways to test them. We do not spend time with our acquaintances and friends merely enjoying their company, we also examine them. If our companion emotionally hurts us in an unfair way, that person failed the exam, and we should simply end that friendship or acquaintance. According to Jana the Refulgent, that is why we need an extremely large number of friends and to spend time with as many people as possible. That is how we can choose the best people from among all of them for any kind of activity we may want.

The Vienna Tour was the most important event in my life that happened during 2003. I waited for it, elated due to my great desire to meet Julia again. Nevertheless, the Vienna Tour was not particularly special. It was like any sightseeing holiday with a girl that was my crush. The magnificent experience that I lived in the Vienna Tour was only my perception within my mind, not so much the real-life event. What the Vienna Tour taught me is that by loving what we do and how we live, we can transform even the most ordinary events into experiences that are full of beauty and immense joy. According to Jana the Refulgent, that is why we need to do as much as we can to feel good. That well-being can transform life into an exciting experience. This does not entirely depend on such life events that may be pleasurable. It mostly depends on the perception that we have of them. That is why optimism was so important for her—optimism can transform everyday life into something special.

In Philip Thompson's classes, I fell in love with chemistry. That is the right way to learn according to Jana the Refulgent. Nature is so gorgeous that we should not just understand it mathematically, but we need to feel an emotional attachment to the Universe. This emotional attachment is not the kind that 19th-century transcendentalists felt for ecosystems unspoiled by human

activity and that you can read in the book by Thoreau (1854) titled "Walden; or, life in the woods." The transcendental emotional attachment to Mother Earth is the kind of love that has been inherited by modern environmentalists, but that was not the kind of love Jana the Refulgent thought we must feel.

The emotional attachment Jana the Refulgent meant that we must have is a love for all the laws of the Universe, and for all the processes that are generated because of these laws. We ought to love as much the nuclear fusion events that occur in the stars of the night sky as the nuclear fission events that occur inside the nuclear reactors made by humans. This is an unconditional love for reality and for what exists. It is not loving some things because they exist without human intervention and hating others because they are anthropogenic. This love for reality and life is based on contemplating the extreme majesty and complexity of life independently of the origin of the phenomena that surround us. There are indeed technologies and situations that might endanger us as a species. However, in our Universe, even the most destructive processes are gorgeous. Jana the Refulgent thought that learning is not just a mathematical and rational process: It is, and must be, a deeply emotional experience. It is an emotional attachment with the Universe, reality, and life.

Jana the Refulgent was quite interested in normative social influence. This means when people behave imitating what most members of society do. Jana the Refulgent said that fashion ruled plenty of human behaviors, even such values and ideas for which we are ready to fight and for which we are ready to die. I believe tattoos are based on normative social influence. That is why there is almost no creativity in such designs and why they tend to look a lot like each other even if they are made on different humans and by different artists. People copy the tattoos of other people, and that is how creativity is lost. It is as if people would not be self-confident enough about their aesthetic tastes to have a tattoo design that they really want without seeing something similar on the skin of other humans. Not every image can be tattooed. The drawings ought to be unoriginal and like those of other tattooed people. For example, many people have tattoos of lepidopterans that belong to the species *Acherontia atropos*. As many people tattoo this species of moth on their skin, it is an acceptable tattoo. Tattoos depicting species of bacteria that are employed to make yogurt such as *Lactobacillus acidophilus* are seldomly made. Therefore, almost no one would want to have a tattoo like that. Another example of this can be said about text. Commissioning tattoos with poems is very common, so plenty of people want them. It is unusual to commission a tattoo that would be a copy of

a tutorial text to build a computer, so no one wants that tattoo.

According to Jana the Refulgent, social interaction is very beneficial. For example, I would not have been awarded a chocolate for telling everyone about the sexual escapades of the Swiss girl if I would not have been a friend of Tini. This shows us why Jana the Refulgent believed having many friends makes our life easy. The reason is that there are always altruistic people ready to do us favors or to offer us many advantages. That is why we must know the largest number of people and get on well with all of them.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 16. *VITIS VINIFERA*

Every New Year's Eve was celebrated at my home in Mexico City by eating 12 grapes (*Vitis vinifera*) at midnight and by toasting with a drink. When 2003 finished and 2004 started, I did not do that. Instead, I performed a libation in honor of Jana the Refulgent. Since then, I performed a libation every year on New Year's Eve in honor of Jana the Refulgent as I did at the beginning of 2004. Even now, I shall also perform libations in honor of her and Emilio the Sage on the 12th of March, the day when I fought the Princess of the Wraiths... The libations in honor of Emilio the Sage and of Jana the Refulgent must be done in the same way as done by the Catholic man that I saw performing a libation not far from Sótano de las Golondrinas, San Luis Potosí, Mexico. The best practice is offering the libation while facing Mariana's lava tubes. This ought to be done regardless of the place in the world where one is located. Mariana's tubes are in the sculpture park known as Paseo de las Esculturas, in the main campus of the university known as Universidad Nacional Autónoma de México (UNAM) in Mexico City. You can offer every beverage that is drunk by humans—even pure water (H_2O) is okay. However, if you can offer wine, that would be the best. This is because this ritual is derived from a Mexican New Year's toast. It might seem strange that I perform libations in honor of persons that are still alive. However, this was the type of honor given to Roman emperors such as Caesar Augustus.

One day I saw how a man died in a street in Cambridge, England. The man was walking in the roadway, just adjacent to the sidewalk. However, he was not walking on the sidewalk. Suddenly, a bus ran over him. His shoes fell from his feet, and he was swiftly thrown forwards with great force through the air until falling face down into the roadway. Since then, I am very careful while walking down the street, and I always walk over the sidewalk if there is one.

Even if Jana the Refulgent did not live in Cambridge anymore, I never stopped keeping in touch with her. Now she was studying for a bachelor's degree in law at King's College London. The campus where she studied was in Somerset House. Once I was chatting with her by telephone using text messages, but I wanted to tell Jana the Refulgent something that was not brief. Therefore, I told her that the phone text messages were not long enough to state what I wanted to say. She then made a telephone call to me. She, of course, paid for the phone call that was by far more expensive than the text messages. She spoke to me for a whole hour, and after that, she

***Vitis vinifera* Linnaeus, 1753 (Vitales: Vitaceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 860.**

always paid for the telephone calls each time she dialed me. We used to speak by telephone a lot and our phone calls were quite long. We spoke about our lives, what we did at that time, and what we thought... Even if Jana the Refulgent was not attending my school anymore, I kept admiring her and praising her teachings. Strangely, my classmate Amy Quantrill had not forgotten the campaign against me for loving Jana the Refulgent, orchestrated by many persons the previous year. Hence, every time I remembered Jana the Refulgent, Amy Quantrill said that Jana the Refulgent would never be my girlfriend and that I should forget about her...

At that time, I decided to read a book by Charles Darwin (1859) that is titled "On the Origin of Species by Means of Natural Selection, or the preservation of favoured races in the struggle for life." I did it on my own initiative; no one asked me to read it because it was not part of the A-level curriculum. Darwin's theory is a powerful explanation as to how biodiversity evolves through time. He said that the individuals that belong to a species compete for resources. There are variations among these individuals. Such individuals that have advantages over others can reproduce. The traits that made them successful are inherited by their offspring. All this happens gradually, so changes are almost invisible for us to see. The book by Darwin is historically important because it generated a radical philosophical and cultural revolution once published.

In a way, this book was the beginning of the modern world based on science, technology, and reason. There is no doubt that showing humanity that planet Earth's biodiversity appeared because of natural mechanisms, without the need for any divine intervention, was something that angered plenty of people. As I visited natural history museums since I was a kid and my uncle Jorge Reyes Mejía always bought books on biological evolution for me, I was not as utterly shocked as were the Victorians when the book was first published. Nonetheless, I can imagine how shocking it was at the time. I really loved the parts of the book where Darwin outlines the artificial selection of pigeons (*Columba livia*) and his hypothesis of how the instinct to build hexagonal cells may have appeared in honeybees (*Apis mellifera*). (If you want to know more about Darwin, please read Appendix F.)

At university, Jana the Refulgent decided to join a student society named Model United Nations. It is a bit like a live action role-playing game (LARP), but the players do not play elves or fantasy warriors. The game involves playing United Nations diplomats. At the end of March 2004, there was an international event named Harvard World Model United Nations in Sharm El-Sheikh, Egypt. This place is not far from the place where it is said that God YHWH (Allah) gave His Law to prophet Moses. Jana the

Refulgent went to that event to play the game that she was a diplomat together with students from other parts of the world.

I found a peculiar former bestseller in the Keynes Library. It was titled "Sur la Piste des Bêtes Ignorées" by Bernard Heuvelmans (1955). It was a fiction work that was written as if it were non-fiction. It was written as if it were a technical treatise on the search for real, living wild animals, even if it was about imaginary animals and extinct megafauna. I liked it because it reminded me of Pokémon and because it was about looking for new species of organisms that are unknown to science. We will not be able to find the creatures described in the book alive, especially because some of them are extinct, such as *Mylodon darwini*, *Australopithecus africanus*, and *Megalapteryx didinus*. However, it is a good motivation to look for real organisms that have not yet been discovered by science.

On Saturday the 1st of May 2004, 10 countries joined the European Union. These countries were Cyprus, Malta, Slovenia, Hungary, Slovakia, Czech Republic, Poland, Lithuania, Latvia, and Estonia. The government of the United Kingdom allowed that citizens from the new members of the European Union could live in Great Britain because, at that time, the United Kingdom was part of the European Union. As a result, there was a massive influx of Polish migrants that arrived to work at the United Kingdom. There were so many Polish people in Great Britain that Polish became the most spoken foreign language in the United Kingdom. Widespread racism then began in the United Kingdom toward Polish immigrants. As Poland was now part of the European Union, there were lower entry requirements for Polish students to study in English at the United Kingdom. Thus, in the following years, plenty of Polish students arrived at Great Britain to study at its schools and universities.

Julia stopped chatting or emailing me as frequently as usual. Being geographically far apart was bad for us. Apparently, she slowly stopped being interested in me. To attract her again, I planned to look for an undescribed species of organism to name it after her. The scientific treatise by Darwin and the science fiction by Heuvelmans that I read motivated me to become a naturalist explorer looking for species of organisms undescribed by science.

During summer holidays, I traveled to Spain, Gibraltar, France, and Poland. In Madrid, Spain, I visited Saldaña, who was studying for an undergraduate degree in philosophy at that time in Universidad Complutense de Madrid. Every afternoon, I went to visit him and his girlfriend Mercedes. They were very nice. As a gift, Saldaña gave me a handwritten poem about me that he wrote while I was in Madrid. At that time, Saldaña was not able to

understand formal logic, one of the subjects he needed to learn at university. He blamed his spiritual view of life as the source of his problems, as according to him, formal logic was a form of scientific thinking that he was lacking. I disagree with him.

Science is not the same as formal logic, not even similar. Science is an a posteriori form of knowledge because you need the Universe to study it to obtain scientific knowledge. Deductive logic is an a priori form of knowledge, no Universe is needed for deductive logic to be true. Philosopher David Hume criticized the scientific method because it was not grounded in deductive logic. You can read this in the book by Hume titled "A Treatise of Human Nature: being an attempt to introduce the experimental method of reasoning into moral subjects" (volume 1, 1739). It was not until the 20th century that philosopher Karl Popper formalized the scientific method in terms of deductive logic, but this development was irrelevant for science. Science kept evolving as if Popper had not been born. Only neuroscientists engaged in consciousness research have read Popper's texts because they behave more like analytic philosophers than as if they were mainstream neuroscientists. Yet they are not interested in Popper's reframing of the scientific method as a deduction. You can read Popper's theory in his book titled "Logik der Forschung" (1934). It is true that for computer scientists, logic is a tool, but it can be used both to develop software about materialist or spiritual stuff. Scientists do use mathematics and math includes logic, but there are no worldviews in mathematical logic. Neither materialistic nor spiritual worldviews. Mathematical logic is pure abstract reasoning devoid of political or religious agendas. Mathematics is not used exclusively by scientists. It is used by all sorts of people. Math has even been the handmaiden to superstition. For example, Claudius Ptolemy and Johannes Kepler used it in astrology. The math used in astrology, as all everyday math, is obviously based on theorems that have been formalized using logic.

Anyway, Saldaña stopped being a spiritual person. After he thought his low grades in logic were the result of his worldview, his professors were able to substitute his purpose in life for a nihilistic outlook. They made him aware of how 19th-century events led society to think life is meaningless. I think being a slave to history is wrong. One needs to accept that people before us were sometimes wrong. We are not forced to build our philosophy on their paradigms. If something went wrong, just forget about it, and start again from the point before things went wrong. You do not need to accept all philosophical innovations from the past, only those that are healthy and useful to you. Some 19th- and 20th-century humans were deeply disturbed. Do not let their ideas harm you; you can choose not to believe

them. What I advocate is not the same as being reactionary. You are not returning to the past to stay there. You ought to create new ideas and promote social change. It is just going to happen in a different direction.

During my 2004 holidays in Continental Europe, I was watching birds. I visited plenty of nature reserves where I saw the ecosystems of Europe. I watched wonderful wild animals there, such as the common fallow deer (*Dama dama*), the red deer (*Cervus elaphus*), the Barbary macaque (*Macaca sylvanus*), the greater flamingo (*Phoenicopterus roseus*), the white stork (*Ciconia ciconia*), the cinereous vulture (*Aegypius monachus*), the Spanish imperial eagle (*Aquila adalberti*), the Iberian green woodpecker (*Picus sharpei*), the Iberian magpie (*Cyanopica cooki*), and the Thekla's lark (*Galerida theklae*).

In Madrid, I visited the world-famous art museum known as Museo del Prado. There, my favorite works of art were "The Garden of Earthly delights" by Hieronymus Bosch and "La Maja Desnuda" by Goya. I also went to Museo Reina Sofía, another museum. I was deeply impressed by a disturbing painting there. That painting is "Guernica" by Picasso (1937). It depicts the baneful effects of war. After that, I went to Seville, Doñana, Gibraltar, and Granada. In Granada, I was awed by the exotic beauty of the Alhambra.

In France, I was in Marseille and La Camargue. Something that was marvelous about the beaches of Spain and France was that women only wore bikini bottoms, nothing else! They were topless. They showed off their bare nipples, navels, and legs in public. This allowed them to look sexier than if they wore bikinis. Mexican women never showed off their nipples in public when they were at beaches. In Mexico, female nipples were considered so awful and impure that they were never shown in public. However, this was not the case with male nipples. They were okay to be shown in public. I think hating female nipples is an absurd superstition. They are great because milk comes out of them. Breastmilk is so beneficial for humanity that the female nipples should be considered as sacred and beautiful as anything else benefitting humankind.

In Poland, I absolutely loved the sculpture of the warrioress mermaid in Rynek Starego Miasta, Warsaw! I think she looks powerful and sexy! According to an old legend, she promised to protect the city. This legend is of course false, as Hitler destroyed the city in 1944 after the Warsaw Uprising. I was not only impressed by the mermaid, but the real girls and young women of Poland were also stunners!

The main reason why I went to Poland was to visit the Puszcza Białowieska, one of the last pristine forests of Europe. There, I had a mystical experience during nighttime that

was very eerie. As I was a birder, I wanted to go inside the forest to look for owls during the night I spent in Białowieża. I left the town and planned to visit the forest close to Narewka River. Just as I was going to enter inside the forest, right at sunset, I noticed that the branches of a shrub were moving. They were moving as if there was wind, but the air was still. The branches of the other trees and shrubs were not moving. When I looked at them using my 7-15x35N Samsung binoculars, I realized that only the branches were moving. There was nothing else in that place. I hesitated to go inside the forest, and little by little, it was getting darker. As nighttime fell, the branches of the moving shrub in the middle of the darkness did not look like mere branches anymore. It seemed that the shadow of a person was moving in that place. That was strange because I never saw a person walking toward the shrub. As everything was getting darker inside the forest, the shadows of the branches were shapeshifting to become an obvious shadow of a person...

When I watched that place with my binoculars for a second time, I was able to see that this person was not a normal human! She was a young maiden with such a pale face that it looked like a white sheet of paper. Both her eyes had a tapetum lucidum such as the eyes of a cat (*Felis catus*). Therefore, they shined! This damsel was something like a wild, supernatural forest spirit. That is why her eyes were more like the eyes of a beast than the eyes of an average person. She may also have been a water spirit from Narewka River. I ran away as quickly as possible until I reached the hotel where I was staying. As I was too frightened, that night I slept listening to a radio. I was listening to a pop music radio station. I also kept the lights turned on the whole night! If you want to listen to the kind of music that was played on Polish pop music radio stations at that time, please watch "O-Zone - Dragostea Din Tei [Official Video]" (2003).

I spent the rest of summer holidays in Mexico. During the airplane flight, I flew over New York City, United States of America. There, from the airplane window, I was able to see the highly famous Statue of Liberty. As soon as I was in Mexico City, I decided to look for new species of organisms to name a new species after Julia. In that way, I thought she would be again attracted to me. To fulfill my purpose, I decided to go on an expedition to a remote forest in Tamaulipas with a friend named Leonardo Soria. My original aim was to find a weird bird that looked a bit like a brown jay (*Cyanocorax morio*), but not identical. I saw it three years before there. I wanted to name it after Julia. I did not find it and concluded that it was a mere brown jay with a mutation that gave an aberrant color to it. As we did not find the bird, Leonardo Soria was a bit angry. Leonardo wanted to go to Tampico because he had never been there.

As I had never been there either, we both agreed to go there. In Tampico during nighttime, Leonardo Soria asked me to go with him to watch prostitutes that were streetwalkers. He suggested that we hire some of them. As when Hirsch asked me the same question the previous year, I rejected his request. I do not know why my former Mexican schoolmates were so fascinated by prostitutes. Apparently, the time in Tampico was a waste.

Nevertheless, in Playa Miramar, the main Tampico beach, I was able to catch a lepidopteran of the same size as a mosquito. I did that while Leonardo Soria was sea bathing. This lepidopteran was like the bizarre lepidopterans that I saw four years before in the Ojuela Mine complex, Durango. After my expedition to Tamaulipas ended, I showed the dead lepidopteran to Professor Jorge Llorente, a taxonomist of butterflies at UNAM. I went to see him to ask him whether such species was already described or not. He told me that no one in Mexico could tell me what it was because there were no experts in this group. Yet, he gave me as a gift an anthology book, so I would learn the basis of the knowledge about the microlepidoptera. The book was "Biodiversidad de Artrópodos de México: hacia una síntesis de su conocimiento" (volume 2, 2000).

That is how, in England, I contacted an expert named Kevin Tuck at the Natural History Museum, London. Kevin Tuck told me that no one knew well the species of microlepidoptera for Mexico. He recommended me that I contact Donald Davis and John Brown from the Smithsonian Institution in the United States of America. That is how I became a researcher of the microlepidoptera.

During my Tamaulipas expedition, while Leonardo Soria and I were still in the forest, Leonardo cut several tiny wildflowers and pressed them inside the leaves of a book. I wondered up to what point such specimens could be useful for scientific studies. To find out this, I contacted a botanist from Instituto de Ecología A.C. (INECOL). I went to see him at Pátzcuaro, Michoacán, where he was working. He was Professor Jerzy Rzędowski. He taught me individually how to collect plant specimens, what data to gather, and how they were kept in herbaria. After training me, he recommended that I purchase a handheld GPS (global positioning system) unit so I could record the precise place where the specimens were collected. The flowers that Leonardo Soria collected were badly collected. He just collected the inflorescences and no non-reproductive organs. Moreover, he did not write down any collection data. Nonetheless, thanks to his misguided efforts, I got interested in something good and important!

After having seen all the biodiversity of plants from El Bajío that Rzędowski showed to me at the Pátzcuaro herbarium, I stopped

being interested only in succulent plants and became interested in all the other flowering plant species as well. My main plant interest stopped being horticulture, and I was then more interested in plant systematics.

I finally decided to stop talking to Julia. Distance was not benefiting us. Julia was not happy with my decision, but I did not care. To forget Julia, I decided to delete my ICQ account. Unfortunately, when I deleted it, I lost all my ICQ account history, including all the stored messages that I exchanged with Mariana. When I deleted Mariana's online chat, I lost all the philosophy I had written up to that time. This autobiography that you are now reading is written in this way to attempt to preserve a little bit of the tone and the atmosphere of Mariana's online chat. This book, of course, lacks the poems and the philosophy essays that were ubiquitous in Mariana's online chat. In a way, by writing this book, I am attempting to recover the great cultural loss that was losing Mariana's online chat.

To avoid having more cybergirlfriends such as Julia, I decided to stop using ICQ and any other similar technologies that could be developed in future years. At the end of summer 2004, I wanted to have a true girlfriend that would live in the same town where I would live. I made a vow to God YHWH in Great St. Mary's Church, Cambridge (52.20537245539114, 0.11843766998707472). I promised Him that if He would give me a girlfriend, I would light seven candles for Him in the church. This is as many candles as the number of oil lamps in the menorah of the biblical tabernacle.

The first girl that I fancied was an American redhead who was a new student. Her name was Caroline. It was too difficult for her to live away from her home and family, so one week after the first day of class, she went back to California. After that, I fancied an English blonde named Melanie. As she did not look too interested in a relationship, I flirted with a gal with gorgeous blue eyes and milky skin, Magdalena. She was always dressed in black because she was a goth. Moreover, she was quite crazy. Her family belonged to the former nobility of Germany and Austria-Hungary and were rather wealthy. Magdalena dressed as a Gothic Lolita. Gothic Lolita fashion is a Japanese way of dressing for girls and young women. It involves wearing vintage-looking black outfits with lots of lace that allow the girls and ladies who wear them to look like elegant dolls. This fashion is childish, sinister, cute, and vampiric at the same time.

Magdalena claimed that she went to the Tokyo fashion shows in Japan to purchase her kawaii outfits. That was believable because at that time, Gothic Lolita fashion was still uncommon in Europe. Previously, I wrote that the goths from Jardín Centenario, Coyoacán, Mexico City and the

goths from Café Bizarro de Coyoacán wore the black outfits of their subculture. This might seem contradictory to the fact that Magdalena had to travel to Japan to dress up as a goth, because it means that if any average, low-income Mexican could dress up as a goth, there was no need to travel to Japan. However, there were several types of goth outfits. Not all of them were like the Gothic Lolita fashion. In fact, most of them were not as kawaii or as elaborate. Most goth fashion styles looked like Victorian outfits or like Hallowe'en witches' costumes.

I stopped courting Magdalena because she was a bit loony. I wooed Caroline, Melanie, and Magdalena during the same month, one girl after another. I was in a hurry and was not willing to waste time. I wanted to find a girlfriend as quickly as possible.

Mr. Owens, a schoolteacher at my school, started a philosophy club. This philosophy society met once a week during lunchtime. I went there because I was interested in philosophy due to the teachings of Emilio the Sage and my conversations with Jana the Refulgent. Every meeting of the Philosophy Society of Cambridge Arts & Sciences involved a talk and a discussion. The talk was a topic that was explained to all of us by a student. The discussion involved the other members giving an opinion regarding the topic. We were around 15 students. My opinions in such gatherings were the first time that I mixed the mysticism that I learned from Emilio the Sage with the social utopias that I learned from Jana the Refulgent. When Mr. Owens listened to the doctrines of Emilio the Sage and of Jana the Refulgent, he said: "I think that you are already a philosopher."

I think that Magdalena the goth was a nice girl because she always supported my viewpoints in the Philosophy Society. I can remember that Gareth always had politically incorrect ideas that were highly radical. My friend Nils had moderate opinions with respect to what most people thought and spoke. Katherine always attempted to say the most sanctimonious and puritanical opinions because she wanted to show everyone that she was a girl of high morals. Oliver Brewis wanted to give the appearance of being an intellectual. While speaking, he always chose words that are found in dictionaries that most people never use in common parlance. Furthermore, he always said maxims that would sound grandiose.

Gleb was the quietest of the group. I remember him mostly for that. He was silent all the time. He just went to listen to what we said. As a matter of fact, most of the members of the Philosophy Society did not have anything in common. Hence, the meetings were not biased or ruled by a shared worldview. Magdalena disliked Mr. Owens because he cheated on his wife with other women. Thus, she claimed he was a bad schoolteacher, saying: "How can a man

Philosophy Society of Cambridge Arts & Sciences 2004–2005

Illustration made by MangaWitch. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 860.**

teach ethics lessons when he is totally immoral?"

I think he was by far a better philosophy schoolteacher than Mr. Robert, my schoolteacher in the high school I formerly attended in Mexico. This is because on one side, Mr. Owens taught us to think for ourselves and to have our own points of view. On the other side, Mr. Robert only taught us to do rote memorization of texts without asking us to understand them. After all, Mr. Owens had a genuine philosophical vocation, and Mr. Robert did not. The only reason why Mr. Robert studied philosophy at university was to keep having his lover as a classmate. She decided to pursue a bachelor's degree in philosophy. Conversely, Mr. Owens was not satisfied with only having sought a bachelor's degree. He was so motivated to learn more about philosophy that he did a Doctor of Philosophy (Philosophiae Doctor (PhD)) degree at the University of Cambridge.

I did introduce the topics of some meetings of the Philosophy Society by giving talks. Once, I gave a talk about biological evolution, and another time about love, which was the strangest meeting of the Philosophy Society. That day, the persons who attended the meeting were completely different to the persons who usually went there. None of the boys of the society went that day because they thought the topic was boring. All my schoolmates who attended the meeting were girls and most of those girls were gals who never attended the meetings. After that day, they did not attend other meetings because they were just interested in love. That was the day with the largest audience.

In 2004, there were two birding hoaxes. In the United Kingdom, some birders reported having seen the almost extinct slender-billed curlew (*Numenius tenuirostris*). In the United States of America, some ornithologists reported having seen the extinct ivory-billed woodpecker (*Campephilus principalis*). Most people gullibly believed in the persons who started the rumors. One of the persons who started a rumor was the prestigious director of the Cornell Lab of Ornithology! You can read about the curlew in the article titled "Sighting of Rare Bird at Minsmere." It was published in "Evening Star (Ipswich, England)" (September 30, 2004). You can read about the woodpecker in the paper by Fitzpatrick et al. (2005) titled "Ivory-billed Woodpecker (*Campephilus principalis*) Persists in Continental North America." It was published in "Science" 308(5727): 1460–1462.

One day, I was talking to a girl named Ottavia in the common room. I told her about something that happened in my country, Mexico. A comely friend of hers who was always with her and who wore glasses said: "I've been in Mexico! I went to Cancún and Chichen Itza! I love your country! I am also a great fan of Mexican

painter Frida Kahlo!" I asked her what her name was. She replied that it was Natalie. She told me that she was born in Germany but that both her parents were from the Czech Republic. Since then, I started to spend time with her.

Since I first met Natalie, I wanted her to be my girlfriend, as I met her just when I was looking for a girlfriend. Natalie only talked to Ottavia, to Magdalena, and to me. Therefore, when Ottavia left the school before finishing the academic year, Natalie had more time to spend with me. One day we agreed to go out for a romantic date, but on the day of the date something unexpected happened. Natalie arrived on time and we both approached each other. When she was just 5 m away from me, she ran away as fast as possible in the opposite direction. At the same time, she was smiling at me while she was waving her hand to say goodbye while not speaking a single word to me. What happened was that Natalie never had a romantic date with a guy before. Hence, she was nervous. That is why she ran away. At that time, I thought it was a rejection. I was extremely sad about that.

Despite the event, I decided to write down a letter by hand to ask her to become my girlfriend. I handed the paper to her where I asked her to accept me as her boyfriend. Natalie agreed and we had our first date after Natalie was already my girlfriend. During our first date, we went to the Sedwick Museum of Earth Sciences. My favorite exhibits there were the skeletons of the Nile hippopotamus (*Hippopotamus amphibius*) and of the Irish elk (*Megaloceros giganteus*). After that, Natalie and I went to have dinner at a restaurant named No. 1 King's Parade. Nowadays, it is named the Cambridge Chop House. After that, we went to the flat where she lived at that time (52.21898853370217, 0.11037949171858313). I got on very well with Natalie. On our following dates, I found she was very sweet and cute. She is the loveliest girl that I have ever met. Natalie was my first true girlfriend. In Natalie's honor and as a thanksgiving to God YHWH, I lit seven candles in Great St. Mary's Church. Since then, I have carried out the same thanksgiving ritual in the same place every time I get a new lover.

On our first date, Natalie and I saw some fossils collected by Charles Darwin in South America. I, of course, told Natalie about Darwin's circumnavigation on board His Majesty's Ship Beagle. Fortunately, I was able to show her the famous ship on the stunning 10 GBP banknote, as it showed the legendary ship together with the genius naturalist. The banknote included depictions of orchids (*Gavilea lutea*), a hummingbird (*Patagona gigas*), and fossil ammonites. It also included the face of Queen Elizabeth II, who was omnipresent on all the banknotes and coins issued in England. According to anthropologist James Frazer (1890) in his book "The

Golden Bough," kings are considered as sacred beings. Frazer was British and by the time I lived in the United Kingdom, the queen was still considered as something akin to a divine creature, as in no other European country was a monarch worshipped with so much passion.

Plenty of birdwatchers are people that compile lists. That is why they always like to see more and more different species. Among all these species that they spot, they value a lot such records of birds that reach places outside of their usual distribution range. To search for these vagrants, some birders travel long distances to watch these individuals and add their species names to their lists. The birdwatchers that do this are known as "twitchers." In the United Kingdom there were plenty of people whose hobby was twitching. These guys gathered in large groups every time a bird reached a place outside of its usual distribution range. One of the best places to do this was the Scilly Archipelago in Cornwall, England during autumn. As a result of this, during half-term I went to Scilly to experience what it was like to be a twitcher!

At that time, since my uncle Jorge Reyes Mejía introduced me to birdwatching, I had already seen 995 different species of wild birds according to the taxonomy found in the book titled "Birds of the World: a checklist" by Clements (fifth edition, 2000). My life bird number 995 was the orange-breasted bunting (*Passerina leclancherii*) in Sierra de Huautla, Morelos, Mexico. However, I had never traveled with the only aim of watching an individual that strayed away from its usual natural distribution range together with a large group of birders. Therefore, going to the Isles of Scilly to be a twitcher was an exciting new experience!

I traveled by train from Cambridge to Penzance and then spent the night in a very old hotel. Its rooms had keys that looked ancient, like the key to a medieval chest! From Penzance I went by ship to the Isles of Scilly. The ship was full of twitchers wearing binoculars and holding spotting scopes. The weather was horrible, and the waves were extremely huge! They brutally shook the ship. The sea was so rough that I feared we might wreck! At some point, I was so seasick that I had to sit in the chairs inside of the ship in fear.

At last, we arrived at St. Mary's! I had more joy for not having to keep sailing in the rough Atlantic Ocean than for the birds I would see during the trip. Watching birds in Scilly during autumn is an experience that I will never forget. That is not so much for the birds, but for the social phenomenon that takes place there. Hundreds of birdwatchers gather at the same time. All of them have sophisticated photography cameras, spotting scopes, and binoculars. Their only aim is to watch a single bird with as much passion as average people go to see rockstars, charismatic politicians, or soccer football matches of the FIFA World Cup.

Among the strayed birds that arrive by mistake to Scilly during autumn due to the strong winds that hit the archipelago, I was able to see a cream-colored courser (*Cursorius cursor*) that arrived from Morocco, a flock of Pallas's leaf warblers (*Phylloscopus proregulus*) that arrived from Siberia, a Bohemian waxwing (*Bombycilla garrulus*) that arrived from Scandinavia, a little bunting (*Emberiza pusilla*) that arrived from Scandinavia, and an ovenbird (*Seiurus aurocapilla*) that arrived from Newfoundland. I was also able to see a jack snipe (*Lymnocryptes minimus*). In fact, this species spends winter every year in Scilly. It is not a vagrant species, so twitchers do not care about it. Nevertheless, I was indeed interested in it, as I had never seen one.

When I was ready to leave, the government decided that due to the rough sea, it was unsafe for any ship to sail. Hence, the British government bought me a ticket for a flight in a very small plane. I flew from the airport of St. Mary's, England to the airport of Land's End, England. From Land's End, I went by bus to Penzance. The little plane flew a few meters above the sea and so I was able to watch some northern gannets (*Morus bassanus*) on the sea using my Samsung 7-15x35N binoculars. The northern gannet was not a lifer for me. I had already seen them at a close distance during the Easter holidays 2004 when I went to Bempton Cliffs, England to watch the Atlantic puffins (*Fratercula arctica*). Nonetheless, watching birds from a moving plane was a fascinating experience!

My girlfriend Natalie was curious about my birding hobby, but she did not quite understand it. Every time I showed a bird to her, and she was able to look at it carefully, she thought that the reason I perceived the world like that was because I am Mexican. According to her, Mexicans are closer to nature than Europeans because she thought Mexicans live in the jungle. I did not spend my childhood in the jungle. However, we should not forget that all that Natalie saw of Mexico was the Riviera Maya of Quintana Roo before the tropical rainforests were cut down. Now, most tropical rainforests of the northeastern coast of the Yucatán Peninsula have been destroyed.

At that time, I went to a conference of the British Ornithologists' Union to listen to the talks of the experts. It was in the Linnean Society of London. The facilities and the library of the Linnean Society of London are majestic, old, and have a rich history. In that place, the theory of evolution by means of natural selection was first announced in a paper submitted by Charles Darwin and Alfred Russell Wallace (1858). This paper was titled "On the Tendency of Species to Form Varieties; and on the Perpetuation of Varieties and Species by Natural Means of Selection." It was published in the "Journal of the Proceedings of the Linnean Society. Zoology" 3(9): 45–62.

In the conference, I met a famous paleontologist who is an expert in non-avian dinosaurs. His name is Darren Naish. During lunchtime, we ate together and talked a lot. He was eloquent, friendly, and passionate about the topics that he loved.

I had a teacher of English whose name was Samantha. She was a good schoolteacher and quite hardworking. I remember her well because she is the only person that I have ever met who was bitten by a venomous snake. She was bitten by an adder (*Vipera berus*) when she was a child in Cornwall, England.

In my school, there were parties during some Friday evenings in the Garden Room of the Cambridge Union Society, a place that now is part of The Orator, a restaurant and bar. (If you want to listen to music that was played at such parties, please watch "Ashanti - Rock Wit U (Awww Baby) (Official Music Video)" (2003)). During one such party, a student dressed up as a stripper. He was from Cambridge School of Visual & Performing Arts, where Nadine previously studied. His name was Patrick. Schoolteacher Samantha was dancing at the party. Patrick approached as if he wanted to dance with her, but Samantha ignored him. She did not want to dance with him.

Despite this, as he was dressed as a stripper, he started to perform a grinding dance with her. He danced behind her while caressing her buttocks with his erect penis. This was a common dance in my school during the 2000s. All girls happily danced in this way. However, Patrick did this without the schoolteacher's consent. Thus, it was the practice of sexual assault known as frotteurism. The schoolteacher was furious. She denounced Patrick to the school principal. Patrick was a good customer because he always paid his fees on time. As the schoolteacher Samantha was attempting to annoy him, the principal decided that to ensure that Patrick would be happy, the best move would be firing Samantha. So, she was fired. The principal instead hired a new teacher. He was an American named Brian.

I applied to the University of Cambridge, so I went to my interview on Monday the 6th of December 2004. It is said that few people do not fail the interview. Nevertheless, I went there. That day, I was nervous... All the persons who were in the waiting room of Queens' College, University of Cambridge were nervous. I can remember that a girl who was also waiting there said: "All the effort that I have made culminates in just these 20 minutes that will last the interview..."

The interview is a bit difficult. The interviewers aggressively question the candidate, attempting to lead the student to logical contradictions. If the student contradicts anything stated in the previous answers, that student loses. The first interviewer was Beverley Glover, who questioned me about systematics,

speciation, and the meaning of biological species. That part of the interview was very difficult, but I succeeded at not contradicting myself. The worst part was that the lady asked me about stuff that was not written down in my school textbooks. It seemed she wanted to see how I thought, not only if I had knowledge.

The second interviewer was Stewart Sage. He was less inquisitorial. His interview seemed a lot more like a regular oral exam. This second interview was about conventional techniques of molecular biology. After the second interview, I ate the food that is eaten daily by the students at the University of Cambridge. Strangely, all the food and drinks tasted the same. It was as if there was an ingredient that was added to everything that the students ingested regardless of what it was.

After that, I went to Arup Building. Nowadays it is known as the David Attenborough Building. I went upstairs above the Cambridge University Museum of Zoology and did the next part of the admissions test in a classroom in front of some real skeletons hung from the ceiling. The skeletons were a pygmy right whale (*Caperea marginata*), a northern bottlenose whale (*Hyperoodon ampullatus*), a Gray's beaked whale (*Mesoplodon grayi*), a narwhal (*Monodon monoceros*), and a killer whale (*Orcinus orca*).

The first written exam was an intelligence quotient test, somewhat like the Wechsler Adult Intelligence Scale. I did it using a computer. After that, I took an exam about mathematics and physics. For this exam, they gave me some blank sheets of paper and a pencil so I could do all the arithmetic and algebraic work there. I would just need to write down the answers on the computer. I never worked as hard for something as I did for the Cambridge interview. Three days later was my 20th birthday when I stopped being a teenager and became a mature man.

During mid-December, Ken Martin organized a holy mass in a church so my school's community would celebrate Christmas. In 2004 the mass took place in the chapel of St. John's College, University of Cambridge. All the schoolteachers went there wearing the gowns and square academic caps that they wore when they graduated from university. The father of the owner of the school went wearing his military mess dress uniform. During that mass I was one of the students who gave a sermon.

The McDonald's fast-food chain had a scary clown mascot named Ronald McDonald. According to an urban legend, it is said that in Antigua Guatemala, a statue of this creepy clown that was sitting on a bench came to life. It frightened two employees of the McDonald's restaurant. As a result of this, one of them died. In 2004, there was a Mexican television show named "Otro

Rollo." The television presenter of this show was Adal Ramones. In December 2004, it was said in this television show that the attack of killer clown Ronald McDonald happened in Cuernavaca, Morelos, Mexico. Soon Mexicans were deeply afraid of the monster. This created a nationwide panic. As a result of this, McDonald's Corporation removed all the statues of evil clowns sitting on benches from all Mexican McDonald's restaurants.

During Christmas holidays 2004, I was in Mexico. I went to Presidio, Veracruz, and there I saw a hummingbird belonging to the species *Lamprolaima rhami*. At that time, I started to pay attention to a website. It was eBird, a project from Cornell University. It was quite new, as it was only two years old. The idea of creating distribution maps of birds based on the field reports of aficionados seemed very exciting. Therefore, I tested how it felt to do it. Eventually, one day I did that in Parque Ecológico de Xochimilco, my favorite birding spot in Mexico City. I regret to confess that I did not like it a lot. The data that it produced was amazing and was very useful even for me. Nonetheless, the emphasis on species diversity instead of the behavior of such species made me overlook plenty of interesting behaviors and important events of the life histories of the birds that I was watching. The reason was that I ended up counting individuals instead of carefully attempting to understand what they were doing.

My style of birdwatching was different. I birded in the same way as Gilbert White (1789) in "The Natural History and Antiquities of Selborne." I was mostly focused on bird behavior. I used to spend more time looking at certain individuals to see what they were doing instead of attempting to count at high speed the largest possible number of species. The way I used to bird was by far more relaxed than the birding style required by eBird. From time to time, I would send a bird list to eBird, but almost never... The good side of the eBird lists is that they allow us to see more new bird species more easily, because briefly one pays attention to absolutely all the birds that one can see and hear. This never happens if one only goes to watch the behavior of a few species, as I almost always birded. In fact, during one of my first lists that I obtained from birding in Parque Ecológico de Xochimilco, I watched a northern waterthrush (*Parkesia noveboracensis*) for the first time. This species is not particularly rare in Mexico City, but I simply never paid as much attention to absolutely all the species of birds that surrounded me as one needs to do when one is compiling an eBird list. That is why I think I never noticed it before.

Due to the hegemonic influence of eBird, in future years after 2004, Mexican amateur birders would focus more on making

catalogs of species than on studying the behavior and the life history of birds. That made me decide to get away from the Mexican birding scene. An issue that I had with eBird was that by following its protocols, the website and its algorithms end up controlling our behavior while birdwatching. In that way, we lose our freedom of watching birds according to our own needs and personal interests to abide by the birding culture that is suggested by eBird. Watching birds following eBird protocols is extremely enjoyable, but that is not the only way of birding. Most people keep their life list in eBird, but I did not do that. An object with so much value should never be possessed by unknown people on the Internet. One does not know if it could ever be hacked by malicious black hats.

On Sunday the 26th of December 2004, there was an earthquake whose epicenter was between Sumatra and Pulau Simeulue, Indonesia. This earthquake produced a dreadful tsunami that killed a huge number of people on the beaches of several countries.

Jurisprudence

According to Jana the Refulgent, it is good to be nice to people in order to be accepted. This implies attempting to be liked by complimenting feats that the other person has successfully accomplished, flattering a person for whatever that person values the most, and always smiling. I believe this advice not only applies to people that are communicating with us, but also to people with whom we are not currently talking or messaging. It is obvious that if someone has done anything good to us, we are right to honor that person, even if that individual cannot see us or listen to us. In those types of cases, we are not looking to be accepted by such people, but for us to accept such people. After all, accepting an individual is a mutual phenomenon. This means that I accept the other person, and the other person accepts me. If the other human being is not communicating with me at a certain time, that person cannot accept me at that time. However, I am still there to accept the absent person. Therefore, rituals to honor people that are not currently in the same room as us, are important. That is why it is good to perform rituals to honor absent heroes, such as libations at New Year's Eve and on the anniversary when I fought the Princess of the Wraiths.

Jana the Refulgent told me that to learn to interact with girls and other people, I should always study human behavior. It is very important to carefully study the human beings that surround us to learn about everything, not just about social interactions. By having seen the death of the man that was run over in Cambridge because of not walking on the sidewalk, I learned to always watch out for dangerous

vehicles. Indeed, to live life, we all need to be social anthropologists studying the behavior of all humankind. That is always useful for us.

When the book "On the Origin of Species by Means of Natural Selection" was first published, the religious faith of many people was shaken. Some people decided to upgrade their worldview to the new scientific discoveries. Other people decided to attack the new theory. Jana the Refulgent was not in favor of having blind faith in any idea. She used to say that when one is having a conversation, one ought to attempt to understand the issues that are being discussed from the point of view of the people with whom we are speaking, not just from our point of view. One should always ask the following questions: Why does this person have a different opinion to me? What cultural axioms does this person have that I do not? What emotions is this person feeling that lead to the sorts of cognitions that are evident in the viewpoints stated? This is not empathy, because we are not placing ourselves in the position of other people to feel compassion for them.

What Jana the Refulgent meant was that we ought to place ourselves in the IDEOLOGICAL worldview of other people to understand their ideas. Then, and only then, we can evaluate the ideas of others merely using logic and not comparing their ideas with our cultural axioms and with what we think. This way of performing philosophical analyses avoids spawning absurd, dogmatic thoughts. This of course does not entail that the ideas of people we want to analyze will change our mind. What this entails is that we can understand why other people think like that. Nevertheless, this way of analyzing ideas indeed allows us to change when the arguments of other people are logically sound or cogent and make sense to us. According to Jana the Refulgent, faith frequently breeds intolerance because it does not allow us to accept new ideas, as it happened in the case of creationists when the book by Darwin was published.

The massive arrival of Polish citizens to the United Kingdom after 2004 led to an increase in racism. Indeed, new people belonging to a different race, with a totally different culture, arrived in the United Kingdom. Many British people discriminated against them for not following the British cultural norms that were widely accepted at that time. The Polish living in the United Kingdom lived with the norms and cultural features of their own ethnicity. To avoid any kind of discriminatory feelings and thoughts, Jana the Refulgent taught that one should always be gentle and kind with other human beings. It does not matter who that person is or how that person would be. By sharing happy moments with other people, one ends up associating such people with pleasant feelings and emotions. Hence, we

do not hate them. That is a way to diminish hatred and intolerance among humans. We only need to allow ourselves to share pleasant moments with everyone regardless of who that person is.

Jana the Refulgent was culturally a European. Being able to understand other cultures did not stop her from being surprised by the traditions of other people. For example, she was freaked out that I ate traditional Mexican food that included insects such as grasshoppers (*Sphenarium purpurascens*), ant larvae (*Liometopum apiculatum*), or larvae of tequila giant-skipper butterflies (*Aegiale hesperiaris*). However, she was able to understand that they were as okay to be eaten in other cultures as European dishes were eaten by her.

Reading the books by Darwin and Heuvelmans motivated me to become a naturalist explorer. This was great and awesome because, according to Jana the Refulgent, we must live our entire life looking for new knowledge. Is there any better way of acquiring knowledge than going out to the field to learn the amazing truths of the Universe directly from nature? There is none. The adventurer who explores nature with the aim of attaining scientific knowledge is the epitome of the wise person according to the teachings of Jana the Refulgent. The reason is that this explorer investigates the Universe in a scientific way by learning through empirical inductions. This adventurer learns directly from what medieval theologians knew as the "book of nature;" this is the Universe by itself!

Jana the Refulgent valued books and reading a lot. Even when she was not reading for her university studies, she read for pleasure about the topics that she liked. Thus, she valued ideas and texts a lot. What a lovely girl Jana the Refulgent was when she was reading! She had a youthful face and beautiful cheeks! She merrily read while smiling as she was wearing her glasses! Every time Jana the Refulgent wanted to give a gift to someone, this gift was always a book (this was, of course, not the case when she gave me the flower of *Rosa*). Therefore, according to her, there is nothing more valuable that a person or a civilization may have than written or oral culture. That is why losing Mariana's online chat was the worst thing that happened to me in 2004. It was the greatest cultural loss that I have ever suffered. Deleting my ICQ account, including Mariana's online chat, was a very serious mistake. I should never have done that. I lost my culture! It was like when Hellenistic Egypt lost its culture when the Library of Alexandria was consumed by the ravenous fire!

Mr. Owens was an adulterer. As Magdalena thought, the treason against his wife was atrocious. However, we should not reject Mr. Owens for that, much less his teachings. According to Jana the Refulgent, nothing in life is perfect. Nothing is exactly as we wish

it is. Nevertheless, we can enjoy something from almost all the events that happen. The same is true about the books that we read and about the ideologies that we learn. The reason why we can enjoy almost everything is that most events and ideas have good sides that can teach us important life lessons or that can allow us to have a happy time. That is why, when something or someone bad can teach us something good, we should not completely reject what we can learn from that source. Such good stuff can be useful for us. That is why we must accept the teachings of Mr. Owens and learn from them, even if they came from the mouth of a sinner.

Another sinner was the director of the Cornell Lab of Ornithology, who did not have enough evidence to claim that he found a living ivory-billed woodpecker (*Campephilus principalis*). Regardless, he scientifically claimed to have found one. Indeed, even if he was such an eminent man, we can criticize his mistakes. Jana the Refulgent frequently criticized people behind their backs. She was a gossip. But this was not a fault. She equally criticized everything and everyone. Indeed, she criticized both the most eminent people, considered by most people to be the best members of society that exist, and people that were socially considered at her same level. This means that we ought to criticize even the most respectable people if they make a mistake. That is why we also should not believe in something only because it was stated by an authoritative source. We always must study evidence judging it by its own merits, not by who stated it.

It might seem now that I am contradicting myself. On one side, I stated that Jana the Refulgent said we ought to be tolerant with everyone. On the other side, that she was a gossip that spent all the time gossiping about all her friends and acquaintances behind their backs. More surprising is the fact that I approve of both apparently inconsistent behaviors. As a matter of fact, they are not inconsistent. The fact that we tolerate people that are different to us does not mean that we should not pay attention to their mistakes. We of course should not criticize them in person if they are not harming us. If the mistake of the other person is not harming us or harming other humans, we should not hurt the other person by stating what we think is mistaken. But we do not hurt other noninvolved people if we tell them the mistake of the person who was mistaken. That is why I justify being a gossip. What I think is important is that gossiping should always be about what the person of whom we speak truly did. We ought not to slander other people, but Jana the Refulgent did not slander other people. Everything that she said about other people behind their backs was true.

Stating the mistakes of other people or institutions and discussing them in private

with other people is not wrong. In fact, this is needed to judge the moral character of people and for democracy to exist in a city-state or in a nation-state. Judging the moral character of other people is good, because there are always people who want to deceive us or to harm us.

My romantic relationship with Natalie was a great achievement that was a result of following the teachings of Jana the Refulgent. Natalie was a shy girl, but by using all the techniques to comfort people that Jana the Refulgent taught me, I was able to start a sexual relationship with her. Moreover, the place that I chose for our first date was extremely memorable. That date venue amazed Natalie. According to Jana the Refulgent, if we want to ask a favor, close a business deal, or seduce our crush, it is always good to amaze that person in a positive way. This can be achieved with our words, with our appearance, or with our actions. The choice of the venue for my first date with Natalie is the best example of how we can impress a person by creating the right image.

The teachings of Jana the Refulgent were extremely useful during the Cambridge interview. Jana the Refulgent was extremely talkative and she liked to speak a lot. I never met someone as garrulous as her before meeting her. If Jana the Refulgent taught me a skill better than any other, it was to speak a lot. She taught me how to speak to communicate with people and all the rules of communication. One of the most important language skills is being able to change the conversation according to our own needs whenever the interlocutor asks us something inconvenient for us, and I was able to apply this technique in my interview with Beverley Glover. In that way, I avoided contradicting myself. That is how I seemed to be wise. Seeming to be wise does not just involve having wisdom. One needs to show others that one has such wisdom by using language suitably.

CHAPTER 17. *ANDROCTONUS AUSTRALIS*

During the 2004 Christmas holidays, I was anxiously waiting for the results of the Cambridge interview. In January 2005, Mr. Owens called me by telephone to inform me that the interview was a success. Now I needed to get straight As in all the subjects to be accepted as a student at the University of Cambridge. That was indeed difficult as I was never a student who got good grades. Mr. Owens told me in early December 2004: "You take care of passing the interview and we take care that you get the top grades that you would need, so don't worry." In the January exams, I did not get straight As. Therefore, I was required to retake them. Mr. Owens was enraged with me. I thought that was unfair because he promised me that my school would help me to get good grades, but no one told me how or what to do.

As I did not have any support, and I would not be able to get top grades by myself, I decided to look for Jana the Refulgent. In 2003, she told me that if for any reason I would need her in the future, I should look for her, and that she would help me. As a student, she always got excellent grades. She was very studious and hardworking. She was always awarded prizes for her academic performance in all the schools where she studied. So, on Saturday the 12th of February 2005, I went to London to meet her in person. That day, everything seemed to be against me. The District and Circle lines of the underground subway rapid transit were closed in the area that included Bayswater station, where I was supposed to meet Jana the Refulgent. Moreover, it seemed I had a sore throat, as if I was going to get ill. However, I was finally able to meet her!

We went to talk at the Starbucks coffeehouse that was in the old Whiteleys shopping mall (51.51480886569992, -0.1885640498840517). Jana the Refulgent paid for both of us. Since then, every time we met and went out to a coffeehouse or restaurant, she paid for both of us. Furthermore, every time I had a schoolbag or other type of bag with me, she carried it for me. At that time, Jana the Refulgent had already made new friends at her university. She was still a close friend of Emma Jackson, one of her friends from Cambridge Arts & Sciences. Jana the Refulgent was very wealthy, so she rented an apartment in the City of Westminster to the north of Hyde Park. This is one of the most expensive London neighborhoods. London is one of the most expensive cities in Europe.

During the time I spent with Jana the Refulgent in the coffeehouse, she taught me to study, to revise, and to use tricks to increase my grades. She told me to focus on

***Androctonus australis* (Linnaeus, 1758) (Scorpiones: Buthidae)**

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whatever would be more important or on where I would have more deficiencies. During the next 19 weeks, I only spent time with my girlfriend Natalie and with Jana the Refulgent, as I got rid of all the rest of my social life to spend all the time focusing on studying for the exams. Jana the Refulgent set a maximum number of times that I could go birdwatching. She also forbade me from going to parties. She prohibited me from going on day trips except if I went birding, if I went out on a date with Natalie, or if I went to the Natural History Museum at Tring to study the bird collections that were kept there by curator Robert Prys-Jones. Such were the 19 weeks devoted to Jana the Refulgent, the most tiring time of all my life. As Emilio the Sage, she never charged for her teachings.

The universities where I applied were the University of Cambridge, the University of Edinburgh, the University of Nottingham, Newcastle University, the University of Leicester, and the University of East Anglia. I visited all of them on their respective open days and I got offers from all of them. I chose as my firm choice the University of Cambridge and as my insurance choice the University of Edinburgh. I went to the open day of the University of Edinburgh in February 2005. I liked the labs more than at other institutions and I thought Scotland was more romantic than England. That is why I chose it as my insurance option. The romantic branding of Scotland was successfully done by writer Walter Scott in the 19th century.

Both the firm choice and the insurance choice tell you the grades that they want you to get. If you do not get the grades that your firm choice asks you to get, then you can be accepted by the insurance option if your grades are good enough. If not, then you enter something called clearing. This means begging for a place at universities if they have one available. This is done by telephone. Your grades are already there, so they can choose you according to that.

My girlfriend Natalie was born on Christmas Day. She was slender. Her hair was extremely soft. Her baby face made her look cute and somewhat childish, for sure younger than her true age. Her looks, the way she moved, and how she spoke gave the impression of innocence. Her breasts were small. Her stomach was flat and toned because she went to the gym every day. Her waist was slim and her hips wide. Her buttocks were round and well-proportioned, totally incredible! I think Natalie was the girl with the most beautiful buttocks in all my school. Her legs were strong and graceful. Her 19-year-old youthful and immaculate body was perfect in all respects! Due to our inexperience at the beginning, when we cuddled each other, all the muscles of our bodies were tense. As time went on, months later, I felt how our bodies were gradually relaxing while we embraced each other.

At the end, we gave ourselves to each other passionately. There are many girls that are cute and adorable. There are also many others that are gym girls with fit, sexy, and attractive bodies. Nevertheless, it is unusual to find girls that are both types at once. Natalie was both a cute, lovely girl and a sexy, attractive hottie.

Natalie and I loved to walk in the streets of the town. When I walked together with her, everything changed. It was as if being close to her would make me feel like I was in a different place. She was exciting, and she made everything that surrounded her more exciting. She was very shy with most people, but chatty with me. Her hugs were as peaceful as the open sea when there is almost no wind blowing. As Natalie never wore bras and only wore crop tops to cover her breasts, her nipples often got hard when it was cold, and they could be seen through her crop tops. I liked that she did not wear bras because when she was sexually aroused with me in the school, her hard nipples could also be seen through her crop top. As the beauty of the body of Natalie was extremely sexually arousing, plenty of the guys at my school ogled her body from top to bottom when they saw her walking down the corridors. Nonetheless, she was not popular because she did not like to talk to most people. If a student wanted to talk to her, she quickly left. Any excuse was fine for her to leave.

Natalie's bedroom did not have any embellishments, only the essential furniture that was included in the rent. Natalie never added any extra objects. As I did, when Natalie was a child, she suffered from nephritis. Hence, she was also hospitalized and almost died. Since she was a kid, she was rejected by her mother, so she suffered from depression throughout her life. Thus, I felt pity for her and wanted to give her all the love and care that she never had, to change her life and make her happy. A beautiful girl like her deserved that. One day, Natalie told me while crying and shedding tears that she wanted to kill herself. I comforted her and persuaded her not to do that. Since then, she thought that I saved her life. She thanked me for that by giving me the most unconditional, tender, and sincere love. Natalie idealized me because according to her, I was the only person who ever understood her in all her life. She also claimed I was the only person who ever loved her. Therefore, she felt that I was the first one who allowed her to find her good side. Natalie used to tell me the following: "I hate everyone; the only one I love is you." She was very insecure because every time she saw I was sad or angry, she immediately thought that she was the reason I was upset and asked me to please forgive her.

Despite being insecure, in our romantic relationship, she always decided everything. I followed all her decisions to please her. To be able to control me all the time, every time

that I wanted to do something that she did not want or that she did not like, she claimed that this idea or decision made her feel sad. As my greater priority was that she was happy, I always ended up doing what she wanted. In fact, she was not always sad. Many times, she took advantage of me by feigning that she was sad. Every time I agreed to do whatever she wanted to avoid her being sad, she immediately got very happy and hugged me. She kissed me and told me that I saved her from sadness. I always felt immensely happy about pleasing her, even if by doing so I went against what I initially wanted.

This may seem like a manipulative and one-sided relationship, but I was extremely happy from seeing that Natalie was happy. There was not anything more important for me than her happiness! So, keeping her happy made me feel constantly euphoric! As Natalie was able to control me very easily, I always did whatever she wanted. We never had any quarrels and there was no verbal abuse in our relationship.

Natalie was a very educated girl, so she was always able to talk about plenty of different scientific, technological, artistic, and cultural topics. Hence, talking to her was intellectually stimulating. She loved mathematics. She was excellent at solving difficult equations and complex math problems. Natalie is one of the few persons that I have met who was thrilled by doing mathematics. She enjoyed it more than socializing with groups of people. I frequently told her that she was very intelligent. She replied that that was not true, that the reason why she seemed to be smart was that she wore glasses. Like Jana the Refulgent, Natalie knew how to speak in five different languages. The difference was that Natalie knew how to speak in French and Jana the Refulgent did not. Jana the Refulgent knew how to speak in Spanish and Natalie did not. Natalie and the refulgent Jana had a lot in common. Both loved to speak a lot about Prague and in general about the Czech Republic. Both played tennis. Both suffered from arachnophobia. Both wore glasses, but Jana the Refulgent only wore them to read, and Natalie wore them all the time.

Until the mid-20th century in Europe and the United States of America, the female fashion that displays the bare belly in public was restricted to exotic belly dancers and beachgoers. However, in India, women showed off their abdomens and belly buttons in public in everyday life situations as a tradition that has existed since immemorial times. When European and American hippies went to India while following the so-called Hippie Trail, they imitated such fashion through cultural appropriation. Since then, many young female hippies dressed like that in their daily life. This fashion was consistent with the ideas of the hippie sexual revolution because the navel was considered erotic in the West.

However, wearing these outfits was not part of mainstream Western culture. A few celebrities such as Cher Sarkisian dared to wear this fashion, but they were exceptions rather than the norm. During the 1970s, anti-pornography feminists claimed that women should not be sexy because being sexy entails objectification. Feminist Ellen Willis opposed these views that repressed female sexuality. She did this by mixing the ideas of the hippie sexual revolution with feminism. In this way she started a movement known as sex-positive feminism. According to her, being sexy was not a form of objectification but a path toward female empowerment. If you want to read about this, please read the article by Willis titled "Lust Horizons: is the women's movement pro-sex?" It was published in "The Village Voice" (June 1981).

High art from the second half of the 19th century depicted plenty of erotic women. In 1871, Lorillard Tobacco Company created an advertisement for one of their products that attempted to imitate erotic high art. The advertisement resembled the paintings made by famous artists Edward Poynter and William-Adolphe Bouguereau. The product was named Pearl, and the label depicted a topless young woman displaying her bare nipples, navel, and feet. Strangely, this lady was walking on the sea, in the same way as it is said that Jesus miraculously walked on the surface of Lake Kinneret. This started a trend of luscious young women on boxes and advertisement campaigns for all sorts of products. They sold well. Therefore, 19th-century marketers concluded that sex sells. As a result of this, throughout the 20th century, sexy hot girls were common in family-friendly mass media.

However, in the 1970s, almost none of the girls in family-friendly media showed off their bare belly buttons, as navels were considered too sexual and immoral for the still dominant Christian conservative culture. In the 1980s, sex-positive feminism provided a moral justification to being sexy, so media moguls embraced this ideology and asked their young female employees to show off their bare belly buttons and other body parts that previously were seen as taboo. In this way, the desire of media companies to increase profits allowed the sexual revolution to enter popular culture.

In Europe and in the United States of America, showing off the midriff and navel in public was not very popular in everyday life until the 2000s. It first became popular among girls of the same age as Natalie and Jana the Refulgent. Such girls grew up watching the Disney animated movies of princesses Ariel and Jasmine, who showed off their tummies and their belly buttons without covering them with any clothing due to the sexy outfits that they wore. These princesses embodied the ideals of sex-positive feminism. They became sex symbols, and all girls wanted to be like them. Moreover, at the time that the girls of

the same generation as Natalie and Jana the Refulgent were teenagers, it was trendy to be a fan of pop singers such as Britney Spears, Shakira Mebarak, and Christina Aguilera. These ladies wore clothing that allowed them to show off their bellies and their navels in public in their music videos and concerts. Therefore, plenty of girls and young women decided to dress following the hypersexualized Y2K fashion trend of showing off their abdomens and belly buttons. Female pop stars of the 2000s were so sexy because sex-positive feminism gradually increased in mass media since the 1980s as its acceptance increased among the public.

Now I shall list several music videos where you can see the girls and women who promoted this fashion. This list includes both fictitious and real people.

If you want to see the animated version of adventurous Princess Ariel, please watch "Jodi Benson - Part of Your World (Official Video From "The Little Mermaid")" (1989). If you want to see the animated version of seductive Princess Jasmine, please watch the video "A Whole New World - Aladdin (1992) 1080p" (1992). If you want to see sexy Britney Spears, please watch "Britney Spears – I'm a Slave 4 U (Official Video)" (2001). If you want to see hot Shakira Mebarak, please watch "Shakira - Whenever, Wherever (Video)" (2001). If you want to see provocative Christina Aguilera, please watch "Christina Aguilera - Dirrty (VIDEO) ft. Redman" (2002).

Natalie and Jana the Refulgent loved to show off their bare tummies and their navels in public, at least since I met them for the first time. Plenty of girls and young women dressed like that only during daytime in the summer months. Nonetheless, Natalie and Jana the Refulgent lived their whole lives showing off their belly buttons. They showed off their abdominal beauty even when they were outdoors during nighttime in the cold winters of Northern Europe. Despite this, they covered well the rest of their bodies with clothing.

For example, they wore coats, but always had their buttons undone so their bare bellies and navels could be seen. As a result of that and by associating such fashion style with them, I ended up developing a strong sexual attraction toward the flat stomachs and belly buttons of girls. I felt more attracted to those parts of the female anatomy than to the rest of the female body. It is very beautiful when a thin girl with a fit body shows off her navel in public because it is possible to caress it and kiss it everywhere. Many girls feel sexually aroused when one caresses or kisses their belly buttons. Generally, the female navel has a heightened sensitivity to touch that is greater than that of other parts of the girls' bodies. So, many girls also have ticklish belly buttons. The girls who show off their navels love to have them caressed and kissed. As a

matter of fact, caressing or kissing the belly button of a girl has similar results as flattering their beauty. Both result in laughs and blushing.

Due to Natalie and Jana the Refulgent, I started to feel an extreme attraction toward female bodies. My fascination toward the nude bodies of girls became a self-transcendent experience because of seeing extremely gorgeous and marvelous ladies. This fascination was not only toward the bodies of Natalie and Jana the Refulgent. I felt it for any girl with a sexually attractive body. I became an admirer of the naked bodies of ravishing girls. From that time onwards, feeling so much sexual desire for the bodies of girls allowed me to become more popular among the girls. It also allowed me to easily start friendly, loving, or sexual relationships with the girls whose bodies I found stunning. The reason is that I behaved with the girls that had sexy bodies in an utmost seductive and gallant way. Since then, I had more female than male friends. I felt sexually attracted to almost all my female friends and all of them knew that. That is how I chose them as my friends.

Even if Natalie and Jana the Refulgent showed off their bare bellies and navels all the time, they were not the girls that showed off their bodies more than all other girls at that time. I had a schoolmate that was a girl named Esther who never wore blouses, T-shirts, tops, or sweaters. She always went to school wearing only bras or bralettes. Be it a sports bra or a bikini top, she only wore a bra or a bralette. Her breasts were big, and she always wore plunge bras or bralettes that allowed her to show off her cleavage. She also wore low-rise trousers to display her bare midriff and her innie belly button. During winter, she always wore a coat when she walked outdoors in the streets of Cambridge. Yet, as soon as she was indoors in my school, she showed off all her body.

Esther used to go to the gym daily and she stuck to a strict diet plan to have an attractive body. Frequently, in her navel piercing, she wore a jewel made of gold that looked like a deadly venomous scorpion (*Androctonus australis*). Esther had casual sex easily with any male student. She had sex with all her male friends and acquaintances that were studying at my school. She once told me that if I felt sexually attracted to her and if I wanted to have sex with her, she would be willing to have sex with me. She indeed looked stunning, but I rejected her suggestion because I was already Natalie's boyfriend. Furthermore, Esther, like the prostitutes that Hirsch and Leonardo Soria offered to me, might have had plenty of sexually transmitted infections, even if she was not a sex worker. If I rejected Hirsch and Leonardo Soria's suggestions, I would of course reject Esther's as well. I have no doubt that her outfits were meant to attract guys to satisfy her sexual urges. Esther's compulsive sexual behavior was so extreme

that many years later, when she married a guy that also studied in Cambridge Arts & Sciences, she needed to avoid spending time with any male acquaintances, keep inside her home without any contact with men, and go to psychotherapy, because she cheated on her husband very easily.

Another girl that wore trousers with an extremely low rise and whose bra, bralette, or crop top was quite short and always sleeveless was Ioulia Chtchelkounova. She differed from Esther by the fact that she did like to feel the wintery cold on her skin when she was outdoors. She frequently shivered because of feeling cold, but she did not care. Her main priority was to show off her physical beauty. Unlike Esther, she was not a sex addict. However, she loved to show off to everyone how sexually attractive she was because she was proud of her body. She was right to be proud, because her abdomen and her innie belly button were indeed dazzling! Hence, it was good that she was displaying her bare beauty all the time.

At that time, I was a good friend of a gal whose name was Sybille. She was my classmate in physics class. Her face was cute and adorable. Her eyes were gray. She was thin, so she had an erotic tummy and a paradisiacal innie navel that she always showed off. Her legs were long and magnificent. Even though she wore very short miniskirts, she always opened her legs, so she displayed her panties in public. That was hot and lovely! During winter, she did cover her whole body.

At that time, I also had a mathematics teacher whose name was Jay. She was a MILF (mother I would like to fuck). She always showed off her bare midriff and outie belly button in class. It was obvious that she went to the gym frequently. My penis always had erections during her class. At that time, Jay also taught me individual enrichment and remedial math classes. She was very cheerful and nice. It is very motivating to learn from a sexy schoolteacher. The Y2K fashion of the 2000s was so sultry that even female schoolteachers displayed their bare tummies and navels to their students in their classes. That was thrilling!

One of my housemates in Tom's house was Shestakova. She always showed off all her abdomen in public due to the outfits that she wore. She showed off all her bare skin from right above her vulva to below her breasts, including her erotic innie belly button. She was an extremely good-looking, statuesque girl that was taller than me. Her eyes were blue. She had perfect facial features. She had an exceedingly sensuous slim body due to spending a lot of time in the gym. Nevertheless, I did not like her a lot because she always wanted to pressure me to drink drinks with ethanol (C_2H_6O). I never pleased her. In fact, every time Shestakova pressured me to drink alcohol, Gareth always reminded me to do what would be

Portrait of Natalie, my former girlfriend

Illustration made by Lisa Saukel (Lighane). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 861.**

better for me, not what would please other people.

The 2000s was the decade when Y2K fashion allowed girls and women to display more of the beauty of their bodies than at other time in the history of Western culture. At that time, it was fashionable to have the low-rise trousers below the underwear. This allowed girls and young women to show the upper part of their panties or G-string. Some girls, such as Anastasia or even Jana the Refulgent, sometimes wore such fashion. (If you want to see Britney Spears wearing this type of fashion, please watch the following video: "Britney Spears At Live on Times Square (TRL Performance)" (2003).) Some other girls wore their low-rise trousers without any underwear. Thus, they showed off the upper part of their buttocks and their butt cracks (intergluteal clefts) in public during their daily life activities, including when they were walking down the street or attending school. Some girls, such as Italy or even Natalie, sometimes wore such fashion. The Y2K fashion of the 2000s was so provocative that sexy girls showed off their butt cracks to everyone. That was electrifying! The low-rise trousers that allowed girls to show off their beauty were invented by designer Alexander McQueen in 1993.

Tom, the owner of the house where I lived, grew a very peculiar plant in his garden. It is named *Galanthus nivalis*. In the middle of winter when everything is covered by snow, almost no plant flowers. Nevertheless, this plant produces abundant flowers and foliage at this time of the year, so it is a weird plant. Tom's garden hence had flowers in the snow.

Madame Araiza, my paternal grandmother, died of diabetes. Before dying, her left leg was amputated because of her illness. During my whole lifetime, I only saw her once, the only day that I went to visit her. The reason was that my mother did not want me to have any contact whatsoever with my paternal family.

In Tom's house, there was a student named Amy Ditheridge. She enjoyed bullying everyone. There was a Chinese boy living in Tom's house. Amy Ditheridge used to tell him that the United States of America was by far superior to China and that eventually the United States of America would destroy China in a war that would lead to the end of China. She always bothered Gareth by telling him that all the ideas of the Tories, the political party that he supported, were bullshit. That made Gareth angry. She bullied Christian Schroder by telling him that everything he liked was useless, ugly, or low quality. This included television shows, sports teams, Hollywood celebrities, and people that he admired. She always told me that my teeth were crooked. That is true because I have buccally ectopic maxillary canines. I have never paid a dentist to perform cosmetic dental surgery on my teeth. She said that to make me feel

miserable. She bullied all of us daily. Nonetheless, Amy Ditheridge had a political weak spot. She was vegan and believed in animal rights. She ignored and hated everyone that she believed abused non-human animals in any way.

One day, Christian Schroder and I met to plan what to do to make Amy Ditheridge think that we abused a non-human animal so she would stop talking to us and pestering us. We knew that Amy Ditheridge hated people who hunt non-human animals. I did not know how to shoot firearms, and I had never killed a vertebrate. However, using fantasy, Christian Schroder and I imagined that we went on a fictitious hunting journey to Africa. This was like the expeditions to Africa made by wealthy Europeans and Americans at the end of the 19th century and at the beginning of the 20th century. Christian Schroder and I imagined that we went to hunt a common eland (*Taurotragus oryx*). We told Amy Ditheridge how we killed the eland with rifles. After that, we told her a detailed account of how we skinned it to turn it into a taxidermy mount. Amy Ditheridge was so appalled that she stopped talking to us forever. Thanks to that elaborate lie, we got rid of her.

Family Araceae is a clade of monocotyledonous plants that have a distinctive inflorescence. Their extremely tiny flowers are found around a structure known as spadix. The spadix is subtended by a grand bract known as spathe. It is likely that the most well-known genus of this family is *Zantedeschia*. It was immortalized by painter Diego Rivera in plenty of his paintings as you can read in Appendix C of this book. On Thursday the 21st of April 2005, an outstanding Araceae from Sumatra, Indonesia bloomed in the Royal Botanic Gardens, Kew. It was an *Amorphophallus titanum*. It has a gigantic inflorescence with a spadix that is taller than a person. The most surprising attribute of this species is that its inflorescence smells like a rotten human corpse! Looking at it in real life with my own eyes was incredibly astonishing. It is indeed quite a strange monster! This fabulous plant was inside a giant pot at the Princess of Wales Conservatory.

Unlike Emilio the Sage, who had a religious outlook on the world, Jana the Refulgent had a mostly scientific outlook on the world. According to Jana the Refulgent, one should only firmly believe in such hypotheses that have been empirically demonstrated using controlled variables and whose results have been statistically analyzed. In fact, she did not believe in the results of scientific papers published in peer-reviewed journals unless these results were replicated by other research groups working in other institutions, the new results were published, and then all published results were subjected to a statistical meta-analysis. Under these standards, most scientific

results reported by science journalists in media outlets are not believable, because most of the time, such results have not been replicated. The standard applied by Jana the Refulgent to believe in scientific results was like that of a science textbook. Nevertheless, I think, in a way, she was right by thinking like this, because very often media outlets report scientific results that are quite impressive but end up not being truthful when someone attempts to replicate them.

The doctrine of Jana the Refulgent obviously does not involve avoiding writing down in our exams such answers that the schoolteachers expect us to answer but that have not been properly replicated. What Jana the Refulgent meant only applies to our faith and what to believe about society, nature, and the Universe. If one of our schoolteachers asks us to write down a specific answer in our exam, we always ought to please that schoolteacher. Nonetheless, one should not believe everything that schoolteachers say. One should always think for oneself and evaluate all the evidence individually. One could say the ideas that Jana the Refulgent taught me are common knowledge that every scientist or engineer learns at university—however, that is not the case. Scientists can indeed be very objective in their research work, but they might not be that objective in their everyday life. The reason is that they often do not mix both parts of their lives. In a way, their expertise is to blame because it does not allow them to know about all the phenomena that happen in the Universe.

When Jana the Refulgent educated me, she always wanted me to become a Renaissance man, a universal man. According to Jana the Refulgent, we always ought to have an open mind regarding all such hypotheses that cannot be subjected to Cartesian scientific methods, followed by statistical analyses, followed by meta-analyses. We should be willing to consider the uncommitted possibility that they might be true or not, but not to have a blind faith regarding the truth or falsity of such ideas. This radical Pyrrhonist opinion of Jana the Refulgent disqualified her from being a follower of logical positivism. According to the absurd tenets of logical positivism that were invented by philosopher Rudolf Carnap, we ought to consider any claim that cannot be demonstrated scientifically, mathematically, or logically as meaningless. Jana the Refulgent thought all metaphysical questions are meaningful even if unknowable, we just need to avoid committing to a dogmatic opinion regarding them, as all options might be possible. If you want to read the silly doctrine known as logical positivism, please read the paper by Carnap (1931) titled "Überwindung der Metaphysik Durch Logische Analyse der Sprache." It was published in "Erkenntnis" 2: 219–241.

I was fascinated by Jana's ideas. Her worldview was unlike anyone else's ideology

at the time. The epistemology of Jana the Refulgent was based on the ideas of Aristotle, Galen, Francis Bacon, and Descartes. Her mystical ideas drew on the doctrines of Paulo Coelho. Jana the Refulgent was a materialist.

Materialism, or more properly physicalism, is attempting to explain everything that exists, taking as the final cause the laws of physics. Science itself is physicalist. The reason is that all biological phenomena are based on chemical reactions that happen at a molecular level of organization. In the same way, all chemistry is based on physical laws. Plenty of the researchers who contributed to the physicalist worldview were not physicalists. Nonetheless, they placed some pieces of the jigsaw puzzle that is reality in their right location by giving us mathematical principles to understand it. Reality is based on mathematical principles that operate between such beings or objects that exist and within such beings or objects that exist, generating existence by themselves.

In Archaic Greece, the most holy Pythagoras said that all reality is numbers and that everything can be expressed numerically. Even if he thought that numbers are supernatural divine forms, trying to find equations that describe natural phenomena is the beginning of science. The earliest atomic theory explained several phenomena that previously seemed miraculous. This atomic theory was suggested by two pre-Socratic philosophers. Firstly, by Leucippus, and then improved by his disciple, Democritus, the laughing philosopher. Hippocrates of Kos only looked for natural causes to explain the etiology of illnesses without the need for supernatural explanations. By looking for materialist causes for almost all natural phenomena, Aristotle continued with this tradition. Epicurus postulated a universe ruled by natural laws devoid of any divine intervention. Galen devised a method to formulate hypotheses regarding the origin of illnesses and the effectivity of drugs to heal them.

During the Middle Ages in Muslim countries, nature was again studied scientifically, but not challenging institutional religious ideas. Among the foremost Islamic wise people that studied nature were Al-Khwarizmi, Avicenna, Jabir ibn Hayyan, and Averroes. In Renaissance Europe, interest in Graeco-Roman science allowed that in the following centuries, Copernicus, Kepler, and Galilei could develop scientific physical explanations about the structure of the Universe. Da Vinci, Paracelsus, and Vesalius attempted to test what the ancients said regarding the biological sciences. Their search for truth allowed them to make new discoveries. European colonialism and imperialism allowed the discovery of new lands. As a result of this, researchers wanted to catalog every new discovery empirically.

Francis Bacon and René Descartes invented scientific methods to test hypotheses and, in this way, attain knowledge from nature. Boyle and Lavoisier used the scientific method to uncover the structure of matter. They delivered alchemy from superstition and therefore created modern chemistry. Leibniz and Newton discovered calculus. With this mathematical novelty, we can understand the natural laws that allow the Universe to exist. The knowledge of these physical laws eventually allowed Thomas Newcomen, James Watt, and other engineers to start the Industrial Revolution. Carl Friedrich Gauss studied probability. This resulted in models that allow us to understand how likely phenomena might occur. Enlightenment political philosophers such as John Locke learned a lot from science and attempted to base their social disciplines on reason and logic. Up to this point, all researchers of Renaissance and modern Europe were faithful followers of God YHWH (Allah) and institutional religion. However, Voltaire, a political thinker, started to criticize the Christian churches of his time. The discovery of evolution by means of natural selection by Patrick Matthew, Charles Darwin, and Alfred Russell Wallace allowed the agnosticism of Protagoras from Classical Greek times to be fashionable again and this time with scientific bases.

Soon, Karl Marx went beyond Voltaire by stating that not only did religion oppress the poor, but it was also false because the Universe can be explained in a scientistic way. By popularizing the unconscious, Sigmund Freud formulated a mechanism of how and why people created God and suggested psychoanalytic theory as a physicalist alternative to understand human beings and society. The study of biological evolution allowed that biologist Ronald Fisher could devise modern statistics. This allows us to not just test hypotheses but also to understand how exact such hypotheses are. Karl Pearson improved the study of statistics and developed the study of correlation. Nikola Tesla created the modern technology that is the basis of today's society. Finally, Planck, Bohr, Einstein, Schrödinger, and Heisenberg demonstrated how important random probability is to understand reality and all life.

All these achievements show us how important Jana's teachings and ideas were. Jana the Refulgent wanted to show me the importance of materialism, controlled experiments, surveys, and statistics to understand the Universe.

The worldview of Jana the Refulgent was close to what I was experiencing and living at the beginning of 2005, as I was enrolled in science classes and my new hobby was biological taxonomy. Thus, I decided to include the mostly scientific worldview of Jana the Refulgent as part of my outlook on reality. At some point, it became even more

important than the ideas of Emilio the Sage, as I gradually stopped thinking about them. However, unlike Saldaña, I never denied the supernatural, as Jana's Pyrrhonism allowed me to have an open mind. That is the difference between being taught by someone who knows about science, such as Jana the Refulgent, and by someone who does not.

Whoever does not know about science looks at our technological modernity and thinks all metanarratives other than science must be wrong because they did not do as much for humankind as science. Whoever knows about science knows its limits and knows that the scientific worldview cannot include judgements about stuff that cannot be tested using experiments or analyzed using statistics. Not every spiritual claim can be denied from the scientific point of view, as not everything can be falsified using the scientific method. Science is meant to understand and predict nature, and to create new technologies. Gödel's incompleteness theorems show you that not all mathematical axioms can be logically proved, so not all mathematics is rational. Science is based on mathematics, a non-entirely rational system, so do not believe in people who tell you that science is all about rationality to change your worldview. Please note that I am only using Gödel's theorems to state that mathematics cannot be wholly proved using logic, not to imply that Plato's hypotheses are true, that minds cannot be studied as mechanisms, or that necessarily there are Deities. To understand Gödel's beauteous and elegant theorems please read the paper by Gödel (1931) titled "Über Formal Unentscheidbare Sätze der 'Principia Mathematica' und Verwandter Systeme I." It was published in "Monatshefte für Mathematik und Physik" 38: 173–198.

In the garden of the Cambridge Union Society, a very tiny plant that belongs to the family Asteraceae was grown. It is known as *Erigeron karvinskianus*. Anastasia cut the inflorescences of that plant to braid them in such a way that she made garlands of them. To make the garlands, she did not use any other material than the inflorescences and the peduncles of the plants. After making the garlands, she wore them as crowns or as bracelets! Botanists refer to the inflorescence of *Erigeron karvinskianus* as its capitulum.

I was extremely satisfied with my A-level studies! I enjoyed them a lot because they were a microcosm that reflected the whole macrocosm that is the Universe and nature. In mathematics, I studied algebra, matrices, trigonometry, proofs of theorems, statistics, integration, and differentiation.

In physics, I studied classical Newtonian mechanics. I studied thermodynamics. I studied electric circuits. I studied longitudinal and electromagnetic waves. I studied magnetism, which included a laboratory class where we levitated an

object. I studied how engines work. I studied materials physics about the materials used in engineering and architecture. I studied relativity. Regarding astrophysics, I studied everything about stars, galaxies, and black holes. I also studied radioactivity. Studying radioactivity included a laboratory class that involved measuring real radioactive sources such as cobalt-60, strontium-90, and polonium-210!

In chemistry, I studied atomic theory and orbitals. I made plenty of stoichiometric equations that were later tested with real-life chemical reactions! I studied ions. I studied redox reactions. I made plenty of acid-base titrations. What I liked about them was how, at some point, a single drop changed the color of the whole solution! I studied inorganic chemistry. My favorite laboratory classes on inorganic chemistry were when we saw how hydrogen exploded and how some metals burnt. I studied the most important functional groups of organic chemistry and how to detect them with exciting lab assays. There were some chemistry laboratory classes where I was given an unknown organic compound, and I had to find out its formula by performing experiments! I studied the transition metals. I studied physical chemistry. I liked it because I learned to measure the properties of chemical reactions and to analyze them using integration and differentiation.

In biology, I spent all the time talking during class to my classmate Judith, so I did not learn as much about that subject, but I know some classes were about the human body; about ecosystems; and about proteins, fats, and sugars. Judith was the girl that was highly addicted to smoking tobacco (*Nicotiana tabacum*). She never did homework and spent all her time bullying schoolteacher Anita Chatterjee. Judith also attempted to make other students laugh by giving silly answers and telling jokes.

Very frequently, when Natalie and I were doing revision for our exams in the Keynes Library, I cut flowers of pansies (*Viola* x *wittrockiana*) in the garden of the Cambridge Union Society to give them to her as gifts. (To know why the pansy has an "x" in its name, please see the glossary.)

I did not attend my graduation party because I had to revise for my exams. My last exams were after the graduation party. I did not ask Natalie to refrain from going to the graduation party, but she did not go either. She did that to show solidarity in my efforts to attain top grades. We spent that night together revising for our exams.

After my last math exam, I exited the door of my school for the last time without saying anything to any of my schoolmates. At my side, equally silent, was Natalie who also had finished her mathematics examination. I spent that afternoon walking down the streets of the town with Natalie as we did many times before, but now we knew that this was the end... My little cute sweetheart

and I cuddled each other. It was not a regular hug. It was a lengthy and meaningful embrace, and we held each other tight like never before. We were both feeling nostalgic for the time we spent together. During that hug, not only our bodies were connected. Our souls were connected, too. It was a cuddle where we clung to the body of the person that we loved as much as we could. In that way we could possess each other as much as possible before the unavoidable farewell. After my experience with Julia, I knew it was not worth having a girlfriend living in another city. I had already talked about that with Natalie. Nevertheless, during that last moment together, I asked her: "Are we going to meet again?" Natalie answered: "Sometimes, in the mind."

I truly felt sad for Natalie. I wanted to take care of her because she was shy and suffered from melancholy. Natalie's last embrace happened on Tuesday the 28th of June 2005 (52.20488631941292, 0.12220696637460678). That afternoon and that hug, Natalie's last embrace, would be idealized and remembered as the end of a happy time of my life. At the same time, I also finished my exams, the 19 weeks devoted to Jana the Refulgent, and all my education before university. From far away, I saw Natalie walking down the street after our farewell, as she left my life forever. Together, with her, a whole era of my life had left me...

Jurisprudence

This is the great treasure of Jana the Refulgent—her method to study and do exam revision. Her method is like the geology of Charles Lyell discussed in his work titled "Principles of Geology: being an attempt to explain the former changes of the Earth's surface, by reference to causes now in operation." Lyell said in his famous 19th-century work that to explain how geological features are created, we should not imagine that they appeared due to events that are not currently happening. He further claimed that modern geological processes are enough to explain the appearance of anything if they keep occurring continuously throughout a long time. This doctrine is known as gradualism.

According to Jana the Refulgent, the same occurs with knowledge. It does not matter if you want to use that knowledge to get good grades or only for pleasure. A person does not become wise spontaneously. Such intellect is the result of gradual, almost imperceptible, daily work. This means that every day we need to study a little bit. We should not hope to attain impressive results. They will not happen in just one day. However, by doing this for a long time, the results will be obvious. Moreover, if you are learning something where equations are used, you need to perform several daily exercises of the math that you will need in your work. Again, at the beginning, the

effects will not be obvious. When we first start doing mathematics exercises, we seem ignorant, and we are indeed ignorant! Nevertheless, after repeating the algebraic procedures many times, we end up getting better until we are clearly experts in mathematics.

Many times, we do not understand something that we need to learn. To fix this, there are two options. The best option is to ask our schoolteachers to tell us what to do. It is not good to ask them without first trying to solve what we want to know alone. If we do not do this first, we are losing the opportunity to teach ourselves. Learning to do self-teaching is an important skill!

The second option to learn something that we do not understand is good if we do not understand the schoolteacher. In that case, we must ask the wisest students such as Yang Jingjie or Nils Petri for advice. If they are our friends, they will be happy to help us. This is where the other great teaching of Jana the Refulgent fits. By making friends through everyday chit-chat and making them like us, we can obtain help when they know something useful for our classes that we do not know. In extremely severe cases, going to London to look for Jana the Refulgent would be needed so she herself can teach us. In 2005, she knew almost everything that I would need to learn, as she also took science classes before studying to become a lawyer.

She was able to teach me how to study in person. This last mechanism that involves asking the scholarch (Jana the Refulgent in this case) was very important even to obtain knowledge that was not academically useful. This is because I frequently asked Jana the Refulgent to please give me advice whenever I would need to know how to behave in a certain situation. At other times, I frequently asked her about existential questions or asked about pragmatic actions for my daily life.

To do classwork or homework, we must always read what we want to hand to our schoolteachers. At that time, I would need to think as if I were the schoolteacher, then judge what grade I would award myself. If I would not be ready to award myself an excellent grade, then I would need to modify it until I would grade it as excellent if I were the schoolteacher. To do this, we ought to use the technique of Jana the Refulgent that involves attempting to think about what is going on inside the brains of other people to think like them.

The most important fact about school is to know that our grades do not measure us as people. They measure the work we perform, but they do not measure us as humans. Not even the opinions that other people might have regarding us truly measure us. It is very important to keep this in mind to avoid every possible frustration that might happen. To avoid me measuring my own worth by my school grades, or by the

opinions of other people, the refulgent gave me unconditional love and positive regard. By doing this, I kept a good self-image.

I developed my self-image from the reflection I got staring into the heavenly eyes of Jana the Refulgent. In that way, I did not care what other people would think about my school grades. She always argued that I was the best. This technique might seem like a self-delusion—that is because perhaps I was not the best and Jana the Refulgent only made me feel like that so I would be happy. Nonetheless, this was not a self-delusion. According to Jana the Refulgent, this was a method to generate a self-fulfilling prophecy. By making me feel that I was the best, I would behave as if I was the best. Even if it seems strange, the faith that Jana the Refulgent had in me, her compliments, and her extreme love toward me indeed produced the expected results!

That is how I became someone committed to my duties. I ended up being by far more responsible, more hardworking, and better in every respect than before meeting Jana the Refulgent. This technique might seem useless if we do not have someone in our lives like Jana the Refulgent, and if we were only to be surrounded by people that would not love us unconditionally. However, to perform this technique, you do not need a young, sexy, and loving teacher such as Jana the Refulgent. We always have ourselves and our own self-image can always be influenced by our own cognitions. In theory, we could always be as unconditional to ourselves as Jana the Refulgent was with me. If we end up having as much faith in ourselves as I had faith in Jana the Refulgent, then we could radically change just by the ideas that we have about ourselves.

There is something that is part of the secret teachings of Jana the Refulgent that now I shall openly discuss. As in the case of Emilio the Sage, Jana the Refulgent also told me certain teachings that were meant to be confidential. This hidden part of Jana the Refulgent is extremely useful to study successfully or for almost anything in life. This teaching is about having a notion of self-sacrifice. Not everything that we are being taught at school is as interesting or as funny as other stuff that we want to do. There are other activities that are more pleasurable. The self-sacrifice technique is to be ready to lose pleasure to achieve our aims. It is through self-sacrifice that we are ready to study, even if by doing so we would need to stop whatever else we would be doing, even if that would make us feel bad. One ought to be willfully ready to diminish the pleasure that one feels without hesitation.

This is a difficult ascetic exercise that can only be achieved by willful hardships. Nevertheless, learning to live with privations always makes us more independent and stronger. Strangely, the secret of Jana the Refulgent that allowed her to be considered as the most beautiful girl of my school was also related to her notion of self-sacrifice.

The genotype of Jana the Refulgent obviously also helped her to be beautiful. Nonetheless, to be the most gorgeous girl in my school, she had to live an extremely healthy lifestyle that did not allow her to enjoy many pleasures. For example, she had to work out in the gym even if she wanted to do something else. She had to eat a healthy diet even if she wanted to eat something more delicious. She was so used to living with privations that did not allow her to have as many pleasures as most people. That is why she was efficient at learning and studying.

The obstacle that does not allow us to live a life of self-sacrifice and privation is the utilitarian ideology that we learn through marketing. Indeed, the richest entrepreneurs use marketing to teach us that pleasure is a reward that we give to ourselves because of self-love. They also teach us that the reduction of pleasure is akin to a punishment. This is of course to sell us plenty of products that make us feel emotional or physical pleasure. However, if we re-educate ourselves as Jana the Refulgent re-educated me, we will realize that self-love often entails reducing one's pleasure instead of increasing it.

I also need to add that privations and self-sacrifices always need to be a result of exercising our own free will for what truly benefits us. We should never undergo self-sacrifices or privations to satisfy the agenda of a church, a government, a political party, or a group of people. If we ever do that, such self-sacrifice would not be for our own benefit, but to satisfy parasitic humans. When Jana the Refulgent educated me to live a lifestyle that potentially could include privations, something that she did even before the 19 weeks devoted to her, she indeed asked me to perform exercises that were not because of my free will but because she wanted that. Nevertheless, she was my refulgent, kind teacher that only wanted the best for me. That is why Jana the Refulgent told me:

"Everything that I do is because I want the best for you."

Regarding materialism, physicalism, the scientific method, and positivism, I want to make a clear distinction between the scientific sphere and the normative sphere. The scientific sphere simply describes the Universe and its laws. The normative sphere merely tells us how to behave and how to live life. Jana the Refulgent could distinguish scientific disciplines from normative disciplines according to the emotions she felt while learning about them. If a theory seemed exciting to her then she believed in it. She always believed in descriptions of the Universe and its laws. If a theory seemed boring to her, then she did not entirely trust it. She always somewhat mistrusted social theories. What this means is that every time that we listen to a hypothesis regarding the workings of the natural world that would not be religious or

metaphysical, it is always good to trust it if it is experimentally and statistically well established. Regarding social theories that seem to be rational, we always must be a little bit mistrustful and not fully believe in them. This is true even if they lack any religious or metaphysical elements because that does not avoid how they can produce an almost religious fanaticism in their followers.

It could be argued that this idea transforms the doctrines of Jana the Refulgent into something self-destructive, because we can conclude that since Jana's theories are social and not physical, chemical, biological, or medical, we should not fully trust them. But this does not truly invalidate Jana's doctrine because she did not claim to possess absolute truths. Her ideas were not a dogmatic religion. She thought they could be refutable and not necessarily true in every possible instance.

One could then criticize the doctrines of Jana the Refulgent with her own belief that everything non-scientific is boring. But her doctrines are not scientific. Therefore, the doctrines of Jana the Refulgent are boring. It is likely that Jana the Refulgent indeed considered them boring, but she did not develop them to have fun, rather to face the hard life involved in being a child living abroad in a foreign country. They were something necessary for her, not made for enjoyment or entertainment.

Natalie's last embrace was the end of an era that was full of learning and plenty of adventures. Natalie's last embrace was an important life transition because, in this life, we ought to learn things to apply them. According to Jana the Refulgent, it is not only important to be wise, but to be able to apply our wisdom in the decisions that we make throughout life and in the way we behave. The great person is not great per se, but in the way that wise individual faces life. Natalie's last embrace was the liminal experience that initiated me into a new era. It was the end of my most important life lessons and the beginning of applying to life everything that I had learned up to that point. That is why Jana the Refulgent did not speculate about many philosophical ideas that would not be significant in our everyday life. Dear reader, please learn from everything that you have read and practice whatever suits you!

CHAPTER 18. *NICOTIANA TABACUM*

Since the day of Natalie's last embrace, Cambridge Arts & Sciences has changed a lot. When I attended my school, all of us knew the owner well. He was John Armstrong. He worked managing the school. He was a good, approachable man. He loved 1980s pop music. He always smoked tobacco (*Nicotiana tabacum*) in a smoking pipe. He only had his school, Cambridge Arts & Sciences, where I was studying; his Cambridge School of Visual & Performing Arts, where Nadine was studying; and a school of English in Canterbury known as Stafford House. In this school, both A-levels and English for foreign students were taught. Both Cambridge schools shared the same offices and exchanged some classrooms. John Armstrong sold his schools... New owners changed the name "Cambridge Arts & Sciences" to the new name, "Cambridge Arts, Technology, and Science" (CATS). In modern times, the Cambridge schools that were formerly owned by John Armstrong do not pay rent to use the classrooms or the library of the Cambridge Union Society. Now CATS Cambridge has its own facilities located on a gigantic new campus, the Elizabeth House. Some students live there, so they do not need to leave the school.

Now two new branches have been opened, CATS Academy Boston in the United States of America and CATS College China in China. The Cambridge School of Visual & Performing Arts (CSVPA) still exists, but now new branches of it have been established: CSVPA London in the United Kingdom, and CSVPA China in China. The school Stafford House still exists, but in addition to the Canterbury School, it now has new branches in Cambridge and London. Now Stafford House does not teach A-levels anymore; it is focused on English for foreign students. As I said before, the old Science Block of John Armstrong's Cambridge Arts & Sciences is now Stafford House Cambridge. All the modern success of CATS, CSVPA, and Stafford House is the result of the reputation of these schools. As they became more reputed, they were bought by wealthier corporations, until they were bought by Yang Huiyan, a world-famous wealthy Chinese entrepreneur. As China was becoming a powerful country, Chinese people wanted to increase their hegemonic power in foreign countries. That is why they bought many British private schools and invested money in some British universities.

When I was attending Cambridge Arts & Sciences, the CSVPA was in a building of the Cambridge Union Society that was

***Nicotiana tabacum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 861.**

known as the Arts Block. Now the CSVPA is in the main building where the offices of Cambridge Arts & Sciences were found while I was studying there. The Arts Block has been demolished. That plot of land was bought by Trinity College, University of Cambridge. They built there a building known as Ramanujan House. I am happy that they named it after mathematician Srinivasa Ramanujan because he was a genius.

During summer 2005, I decided to travel through all Baja California, from Tijuana to Cabo San Lucas, to look for microlepidoptera, my new interest. I traveled with Arévalo. This expedition was a complete disaster! That is because I did not know how to collect microlepidoptera, but I learned from my mistakes. Arévalo saw how I used the techniques that I learned from Mariana to predict the future using my life list of birds. He was afraid when he saw that my predictions for the stuff that was going to happen during the expedition came true. I only did that for fun, and it was not serious. However, he took it seriously.

When Arévalo was attending the same Mexican middle school as me, he became a drug addict. That was not unusual, due to how easily recreational drugs were found in that school and how strong the pressure was to take them. As a result of his addiction, he suffered from methamphetamine-induced psychosis. While we were in middle school, Arévalo started to write letters by hand that he later set on fire. He claimed that, in that way, such messages reached the dead. He wanted to summon the dead to create an undead army to stop an imminent alien invasion of planet Earth. As he started to behave in a strange way, he was sent to psychotherapy with Estela Durán, the same woman who was also my mother's therapist. She hypnotized my mother so her self-esteem could increase.

One day, Arévalo destroyed the paintings of his uncle Gerardo using a knife. Therefore, he was sent to a psychiatric ward. Afterward, he left the asylum but still needed to take haloperidol to avoid having psychotic episodes. During our expedition one night in San Quintín, Baja California, Arévalo forgot to take his pill, so he started to tell me that he knew something terrible had happened in the world. I asked him why. He told me that he saw it in the sea. He said that the sea was rough, saying: "She is furious because of what has happened. Watch the sea waves, they look like the body of a woman!" The waves looked normal, as they always look in the sea...

At that time, I understood why Emilio the Sage claimed that the administrators of the school that we attended were crazy when they claimed to be able to have conversations with a quartz (SiO_2). Apparently, the mentally ill imagine that lifeless objects without any artificial intelligence have emotions and

communicate with people. Later, they believe in their own fantasies.

One week after reaching Cabo San Lucas, I traveled to Costa Rica with my parents. In Tortuguero, Costa Rica, I saw a couple of wild black-and-white hawk-eagles (*Spizaetus melanoleucus*). In Monteverde, Costa Rica, I was able to watch in the cloud forest a couple of wild resplendent quetzals (*Pharomachrus mocinno*). The resplendent quetzal was a sacred bird in ancient Mesoamerica. It was a symbol for divinity, rain, and the fertility of the countryside. It was the holy bird of God Quetzalcoatl (Kukulkan in Maya). The ancients may have chosen it to be a holy bird because its feathers are quite refulgent!

The most popular dish in Costa Rica is the so-called "gallo pinto." This is rice (*Oryza sativa*) with beans (*Phaseolus vulgaris*). I ate this every day... In Costa Rica, I noticed that most places with native forests had been destroyed to grow agricultural crops. I wrote to my teacher, Jana the Refulgent, about how sad I felt with the environmental damage in Costa Rica. She told me that the environmental destruction of Costa Rican wilderness was good, and that humankind should always prioritize their own welfare rather than the welfare of other species. I was angry with her because of her idea.

After my holidays in Costa Rica, I ended up having 1171 different species of birds in my life list according to the book "Birds of the World: a checklist" by Clements (fifth edition, 2000). My lifer number 1171 was the bronze-tailed plumeleteer (*Chalybura urochrysia*) from Puerto Viejo Sarapiquí, Costa Rica. I saw not only birds in Costa Rica, but also other interesting wild animals, such as the Hoffmann's two-toed sloth (*Choloepus hoffmanni*), the Panamanian white-faced capuchin (*Cebus imitator*), and the American crocodile (*Crocodylus acutus*).

After my exams were marked, I graduated from A-level. The examination board that marked my mathematics, physics, and biology exams was Edexcel. The examination board that marked my chemistry exams was Oxford, Cambridge, and RSA Examinations (OCR). RSA stands for Royal Society of Arts. My official graduation was not a party. This graduation only entailed Edexcel and OCR bureaucrats printing and archiving official documents approved by the British government.

A few days after having returned to Mexico City from San José de Costa Rica, I knew my exam results. I did not get straight As. Hence, I was rejected by the University of Cambridge and instead accepted into the University of Edinburgh.

Jana the Refulgent told me I should not feel bad about not having been accepted by the University of Cambridge. She said that all the events that happened to me were for my good and that they happened for a reason. She added that my path in the University of

Edinburgh was what I needed to fulfill. In a way, she did believe as philosopher Gottfried Leibniz that we live in the best of all possible worlds, so everything that happens, even the grimmest events, at the end have good consequences. Leibniz (1710) wrote this in his book titled "Essais de Théodicée sur la Bonté de Dieu, la Liberté de l'Homme et l'Origine du Mal." But Leibniz's worldview was not the only reason why Jana the Refulgent told me that.

Now, I will state the premises that led Jana the Refulgent to believe that what happened to me happened for a good reason. Even if I studied as much as possible, more than for anything else in all my life, I was not able to achieve excellent grades in mathematics and physics. The reason was that I was not good at mathematics. Of course, this harmed not just my grade in math, but also in physics, because it is a highly mathematical science. Even though I was able to learn mathematics thanks to my schoolteachers (such as Mario Wilson and sexy Jay), only two years had passed since I first learned mathematics. This means I was quite unexperienced.

It was expected that by 2005, I would already have 15 years of experience, but I only had two. I never learned mathematics before 2003 because Madame Klahr never taught me the basis of arithmetic in a correct way during elementary school. Moreover, Mr. Guadarrama never taught me the basis of algebra in a correct way during middle school. The academic level required for students at the University of Cambridge was extremely high. If even with my average mathematics and physics grades, I would have been accepted by the University of Cambridge, I would not be able to understand all my lectures because everything would be beyond my understanding.

This would lead to getting low grades or maybe even failing some subjects. To be able to work at the expected level, I would need to study in excess. That amount of study would make me feel extremely stressed. That would make me live a miserable life that I would not enjoy even a bit. That is why being accepted by a university that would not require such a high academic level would be the best for me. I could then learn at my suitable level of understanding and obtain more knowledge out of my lectures, as I would not be as stressed or as pressured by an unsurmountable workload. This would allow me to have a better quality of life and get better grades.

This is why not being accepted by the University of Cambridge was, in fact, best for me, and why Jana the Refulgent said my path in the University of Edinburgh was what I needed to fulfill, because that is the university where I was able to be accepted with my own effort. Therefore, that is where I should put into practice the teachings of Jana the Refulgent. Jana the Refulgent told me that I should not feel

bad, because the most suitable university for a person is always the one that teaches mathematics at the same level as the one attained by that person. I could always study mathematics by myself and learn everything that is studied at Cambridge by myself at my own pace. I could do this without suffering all the stress involved in studying for exams at a level that I would not understand because it would be too high for me.

Furthermore, the time that I would need to study at the University of Edinburgh to complete a bachelor's degree in biology was four years. The time I would need to study at the University of Cambridge to complete a bachelor's degree in natural sciences was three years. Hence, the education at the University of Edinburgh would be less crammed because I would have an extra year to take it easy and be less stressed. The education at the University of Cambridge was so accelerated that four years was enough to complete both a bachelor's and a master's degree!

Sybille was my classmate in physics class. Sybille's father studied at the University of Cambridge. He was an honorary fellow of one of the colleges of the university. He even granted them 8,000,000 GBP to build a new building named after him. The name of the building is Hauser Forum. Even if Sybille would be easily admitted to the University of Cambridge, she did not apply to that university because it would be too stressful for her, so she instead applied to University College London.

At the end of August 2005, there was a catastrophic hurricane that killed many people in the United States of America. It was known as Hurricane Katrina.

After a welcome presentation by Professor Bond, I was matriculated as a biology student at the University of Edinburgh on Tuesday the 13th of September 2005 by Professor Norman Wilson, my student adviser. He was not like Ken Martin in my sixth form school. Professor Wilson spoke a lot with me, so he fulfilled his role as it was supposed to be.

Edinburgh is a big old city. In the city center, there is an enormous castle made of sandstone. This castle was built on top of a dormant volcano known as Castle Rock. From the castle to the Palace of Holyroodhouse, the royal palace of Scotland, there is a magnificent avenue known as the Royal Mile. At each side of this avenue, there are innumerable narrow alleys known as closes. This part of the city is known as the Old Town. To the north, one can find the New Town. This part has majestic buildings. Behind the Palace of Holyroodhouse, one can find a dormant volcano known as Arthur's Seat. This volcano was named after legendary King Arthur. The most common ecosystem in its mountainsides is the typical moorland that is ubiquitous in Scotland.

In the north of the city is the Port of Leith. It is on the Firth of Forth, an inlet of the North Sea. In the south of the city there are suburbs with plenty of small, private houses. If one goes further south, one will find Rosslyn Chapel, a sublime church. In the southernmost part of the city, behind all the houses, there are some high, dormant volcanoes known as the Pentland Hills. The most charismatic wild animals found in Edinburgh are the common ling (*Molva molva*), the saithe (*Pollachius virens*), the pollack (*Pollachius pollachius*), the Atlantic cod (*Gadus morhua*), the common bottlenose dolphin (*Tursiops truncatus*), the eastern gray squirrel (*Sciurus carolinensis*), the common wood pigeon (*Columba palumbus*), the black-headed gull (*Chroicocephalus ridibundus*), the great cormorant (*Phalacrocorax carbo*), and the carrion crow (*Corvus corone*).

While I was studying at the University of Edinburgh, the university president was Timothy O'Shea. The coat of arms of the university has at its lowermost part an image of the Castle of Maidens. This is Edinburgh Castle during the Middle Ages and the Renaissance. In the middle of the coat of arms, there is an open book and on top of it an inflorescence of a thistle (*Cirsium vulgare*). Botanists refer to the inflorescence of a thistle as its capitulum. In the background of the coat of arms is the cross where St. Andrew underwent martyrdom. St. Andrew was one of the original 12 apostles of Jesus.

The thistle and St. Andrew's Cross are national symbols of Scotland. They were placed in the university coat of arms because Edinburgh is the capital city of Scotland. The thistle was chosen as a symbol because once upon a time, during the Middle Ages, when a Scandinavian army invaded Scotland, a thistle was supposed to have saved the Scottish army. When the Scandinavians wanted to ambush the Scots during nighttime, a Scandinavian soldier was injured by the prickles of a thistle leaf and screamed in pain. The Scots woke up, so they were not ambushed. St. Andrew's Cross is a national symbol of Scotland because some human bones that supposedly were the relics of St. Andrew were transported in old times by a Christian saint to what is now St. Andrews, Scotland. Thus St. Andrew became the patron saint of Scotland.

The University of Edinburgh is an old university that was opened during the Renaissance. During the Enlightenment, it was one of the most important institutions in all Europe. It contributed a lot of new knowledge. Plenty of important persons that developed science and technology during the 19th century studied there. Among the celebrities that studied or worked at the University of Edinburgh are Charles Darwin, Adam Smith, James Clerk Maxwell, Alexander Graham Bell, Thomas

Bayes, Joseph Lister, J. K. Rowling, David Hume, Arthur Conan Doyle, Robert Louis Stevenson, James Hutton, Walter Scott, Thomas Carlyle, and Wyville Thomson. Moreover, 26 persons from there are Nobel Prize winners.

The University of Edinburgh is considered the best university in Scotland and one of the best in the world. It is the university with the second largest number of applications in the United Kingdom. It is the university that has the third largest endowment in the United Kingdom. Being accepted by this institution is by far better than being accepted by Universidad Nacional Autónoma de México (UNAM), the best university in Mexico. UNAM is not as good as the University of Edinburgh in the lists of university rankings. Therefore, all my efforts were rewarded as I finally was able to be accepted by a prestigious university thanks to the teachings of Jana the Refulgent.

The University of Edinburgh is not found within a single campus. There are several different campuses far away from each other. The Central Area has some of the oldest buildings of the university, such as the Old College and the Old Medical School. In that area there is also a huge library and a park known as George Square Gardens. Another campus is a stunning building known as the New College where religion is taught. Pollock Halls of Residence is another campus of the university. It is quite close to Mount Arthur's Seat. Many students live there. I am so happy that I did not live there, but in a place where I was not as close to other young students. The reason why I am happy is because it is said that in Pollock Halls of Residence, there have been several cases of meningitis, an infectious disease caused by the bacterium *Neisseria meningitidis*.

Holyrood Campus includes several gyms and pools to play sports. That is also where we students had to sit written exams. King's Buildings is the beautiful campus where I spent most of the time studying. There is also a campus in the Royal Infirmary of Edinburgh, in Little France, that is known as BioQuarter. The Western General Hospital is also a place where medical students learn to be physicians. Far away from the city center in the south is Roslin Institute, a campus for veterinary students. That is where Dolly (6LLS), the sheep (*Ovis aries*), was born. The whole University of Edinburgh was originally located in the place where the Old College currently stands. It was formerly a church named Kirk o' Field because it was in the countryside, as it was outside of the King's Wall, the city wall. When the university was first opened inside Kirk o' Field, this church was already inside the city of Edinburgh, because the city was bigger at the time due to the construction of the Flodden Wall. The second husband of Mary, Queen of Scots

was killed in Kirk o' Field. I guess he is the ghost that haunts Old College...

During the first week at university, there are several parties for new students. This is known as Freshers' Week. During that week, I met a young British woman who was also starting her undergraduate degree. She suffered from a strange skin condition known as dermatographism. She lifted her skirt and told me to touch the skin of her thigh with my fingertip and fingernail. Then she asked me to move my finger without stopping, touching the skin of her thighs with my fingertip and fingernail. Whatever drawings, numbers, or letters I made were displayed as raised lines over her skin. Such texts or drawings disappeared in less than an hour, as the skin of her thighs went back to normal.

At the University of Edinburgh, we did not wear any uniform. During my freshman year at university, while working toward a bachelor's degree in biology, I got As in all the subjects, the highest grades a student can get. That was thanks to the techniques that I learned from my teacher, Jana the Refulgent. She told me that one needs to start revising for the exam the very same day that the professor teaches us something. At my university, every time the exams were close at hand, I decreed that the immediate weeks before the exams were weeks devoted to Jana the Refulgent. This means that the same practices and discipline followed during the 19 weeks devoted to Jana the Refulgent were going to be followed. Since then, there are not only weeks devoted to Jana the Refulgent. There are also days devoted to Jana the Refulgent. These are days or weeks when one is engaged in an activity that has priority over anything else.

The days or weeks devoted to Jana the Refulgent are ritual days. The ritual involves making a list of wishes. Every time one wishes to do something that does not have priority over our main task, instead of doing it, one writes the wish in a notebook. Every time there are breaks or at the end of the time devoted to Jana the Refulgent, I perform the wishes listed in the notebook. Every time these wishes are fulfilled during breaks that happen during the time devoted to Jana the Refulgent, the listed activities that are fulfilled are known as indulgences. They are known as this because they are little transgressions that are allowed.

As a ritual, the time devoted to Jana the Refulgent can also be useful as a protection against great evils. It allows us to inhibit desires that might lead us to temptation or to fall into the clutches of bad people. The time devoted to Jana the Refulgent is especially useful against demons and necromancy, even if Jana the Refulgent does not believe such evils exist. In 2005, I did not believe in them either, as I followed everything that Jana the Refulgent said. Since I started pursuing my bachelor's degree, the route of Mariana was always followed to remember my "Journey" from

Portrait of the first Birgitta, the sinister

Illustration made by Paloma Díaz (Balandis). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 861.**

Mexico to the United Kingdom, my adaptations to my new lifestyle, and my path that started since I was an A-level student and finished when I became a university student. (Please see Appendix D to know the route that symbolizes this path.)

During freshman year, I lived in a large student residence in Robertson's Close (55.94879583385765, -3.185478247362503). I had a single bedroom, but the bathroom was shared with other students. Most of the students in that residence were American and they smoked so much pot (*Cannabis sativa*) that almost every night, they accidentally activated the smoke alarm with the smoke created by the lit ends of their joints. Hence, almost every night, we had to evacuate the building, and a fire engine arrived, sounding its siren. The firefighters left when they noticed it was a false alarm. Fortunately, rooms were not shared, and the building was huge, so secondhand smoke did not reach me. Every morning that I walked from Robertson's Close to King's Buildings, I walked in front of the place where Charles Darwin lived while he was studying at the University of Edinburgh! All my lectures during my first year were in the gigantic Swann Lecture Theatre, together with more than 300 classmates (55.921605683688846, -3.172070122804763). The laboratory classes and the tutorials were in different rooms.

At university, we had a very beautiful course named Origin and Diversity of Life. It was taught by Professor Deacon. In the laboratory classes of that course, we made a sketchbook as part of our classwork. Surprising animals were displayed to us in the lab. They were alive! We drew them using a pencil. Furthermore, we dissected a dead blow lugworm (*Arenicola marina*) that we drew. We also drew living plants at the Royal Botanic Garden Edinburgh. We also drew dissected flowers (*Pentas lanceolata* & *Antirrhinum majus*). We learned to culture microorganisms. We drew their colonies that we cultured on agar plates. We also drew microbes that we saw using microscopes. I love my sketchbook! They taught us art techniques for life drawing. I already knew a little bit about life drawing, as in Cambridge Arts & Sciences I attended some life drawing classes of an art schoolteacher named Derek. The difference was that in Derek's classes, we drew nude young women that posed in front of us. In Professor Deacon's classes, we drew bacteria, plants, diatoms, fungi, and non-human animals.

In Edinburgh, I met a Polish classmate whose Catholic baptismal name was Birgitta. She was the person I wish I would never have met at all... Her true name was not Birgitta, but she loved her baptismal name more than her real name, so she used it. "Heliga Birgitta" is the Swedish name of St. Bridget, a medieval Swedish saint.

The first Birgitta arrived as part of the massive influx of Polish migrants that arrived at the United Kingdom to get a British higher education after Poland became a member state of the European Union. She was a young woman that appeared to have a different personality than her true one. One would only truly get to know her after spending a lot of time with her. At first sight, she seemed to be a happy and nice woman. It seemed she was very interested in me and that she felt sexually attracted to me. As I started to spend a lot of time with her and to go out with her to the beach, to hike in the mountains, to museums, and to the cinema theater, she made me fall in love with her by seducing me.

One day we had a genetics tutorial with Professor Chamberlain in one of the small classrooms. During the tutorial, the professor asked all the students some questions to ensure we were learning. I answered everything correctly. Birgitta the First was not able to answer rightly. Birgitta the First was enraged with me because I was able to answer something that she could not in front of all our classmates. I do not know why she was very angry. She should have studied more. However, later, everything went back to normal. Birgitta the First kept being a loving lass. Nevertheless, our relationship slightly changed after Professor Chamberlain's tutorial. When it seemed that Birgitta the First wanted to be my lover, suddenly she angrily rebuked me for trivial stuff. Sometimes she loved me and other times she abused me. Due to the "love" that I felt she gave me, I started to tolerate her mistreatments. As time went on, the love was decreasing, and the abuse was increasing. At some point there was no love, just abuse.

The foremost reason why Birgitta the First hated me was because my classmates regarded me as a biology expert. Whenever my classmates had difficulty learning something, they looked for me so I could explain that to them. They also asked me for help to tell them in what reviews they should look for information for their essays. When Birgitta the First noticed that I was madly in love with her, she rejected me and engaged in making my life miserable. Everything seemed as if Birgitta the First would have looked for me to amuse herself with the psychological torture she would inflict on a victim.

She used to go every day to listen to the Catholic holy mass at St. Albert's Catholic Chaplaincy. Her hobby was playing classical music with her violin. To avoid harming the strings of her violin, she cut the fingernails of the hand that played the strings. The fingernails of her other hand were very long. Her other hobby was singing religious Catholic hymns with her high-pitched voice. In the beginning, Birgitta the First was my only friend at university and the only person with whom I spent time. After

she began to hate me, I started to befriend other people because every time we spent time together, she ended up mistreating me. She used to tell me hurtful words. At other times she used silent treatment as a form of punishment. She felt a great contempt for me. Everything she did was hurting me because she previously did as much as she could to make me fall in love with her. Even though I looked for new friends, I did not stop being abused by her, as she kept looking for me. Because I loved her, I could not refuse spending time with her...

Not far from Edinburgh, there is an island known as Bass Rock. There is a colony of northern gannets (*Morus bassanus*) living there. It is said that in the Middle Ages, that island was inhabited by St. Baldred, a Catholic mystic hermit. Close to that island, I saw a common minke whale (*Balaenoptera acutorostrata*).

Around that time, I befriended Zafeiria, my classmate. I frequently went to visit her at her apartment in Buccleuch Street. Her flatmate was a very lovely young woman named Agnese, who also happened to be one of our classmates. At that time, my hobby was performing home chemistry experiments. I did them in the kitchen of Zafeiria's apartment. I can remember that every time I went to Zafeiria's flat to perform chemistry experiments with my reagents and glassware, I also had with me a wooden staff with a carved western barn owl (*Tyto alba*) on top of it. The use of this staff was to impress people by making them think that I was a wise person, as the barn owl looks a little bit like the little owl (*Athene noctua*), the symbol of wisdom. There were always people that I could impress with my staff and my experiments because, as Zafeiria was a very sociable young woman, there were always visitors in her apartment. She liked that I was always doing experiments in her kitchen because that showed to all her friends that she was a cultured woman that understood and supported science.

I arrived at her flat to visit her without previous notice at any random time of the day. Some days I arrived there as early as 7:00 AM and others as late as 11:00 PM. She always welcomed me. Sometimes I arrived so early that she was still sleeping but she always woke up to open the door and talked to me even if she was drowsy. Zafeiria was a very lazy student. She often skipped lectures, but I used to go to visit her when I was free. According to Zafeiria, when she was a kid, she was very interested in science and was very studious. It was obvious that this was true because she had a lot of knowledge. Her bane was becoming addicted to Ritalin (methylphenidate), a stimulant psychiatric medicine that is given to people that suffer from attention deficit hyperactivity disorder (ADHD).

At the time I was Zafeiria's friend, she was very interested in unidentified flying objects (UFO). She was sure that soon there would

be an alien invasion of planet Earth. Despite this, she was not mentally ill because she did not suffer from psychosis like Arévalo, she only claimed it would happen. She helped me a lot during the hard time that Birgitta the First gave me. She showed a lot of emotional support and love for me.

Zafeiria was taller than me. She was svelte and always dressed wearing stylish outfits sold by prestigious designers. Her legs were long and stunning. Her waist was slim and her stomach flat. She loved to show off her sultry navel. Her overall beauty was striking. Zafeiria had a belly button piercing. Fortunately, she almost never wore jewels in her navel piercing, so most of the time her innie belly button could be seen in all its majesty.

At that time, I also got on well with Candice, an otaku that loved video games, computer games, anime, and manga. Candice wore glasses. She had long, straight, ginger hair that made her look beautiful. Candice was extremely taciturn and did not enjoy spending time with friends. Nevertheless, she enjoyed talking to me. Her personality was the result of having suffered a psychological trauma due to her mother being murdered when she was seven years old. Candice was a fan of the Moomins and owned several accessories of that franchise. She also loved origami. She had an amazing imagination because she created an original manga character that she frequently drew in her notebooks. His name was Racoon.

Kirsty Morton and Danielle Potter were also my friends. I talked to them during lectures when I sometimes sat close to them. Kirsty was friendly, attractive, and hot. She loved wearing miniskirts. She had shapely legs. I was ogling her legs all the time during lectures because she always sat close to me in Swann Lecture Theatre. Her abdomen was pretty and her innie navel sexy. She had a belly button piercing and another piercing in her tongue. It must have been very painful when she pierced her tongue! When I first met Kirsty, she spoke with a Scottish accent. In the following three years, she gradually changed it for a posh accent usually known as received pronunciation.

The other young woman that usually sat close to me was Danielle. She was blonde, short, and her voice was high-pitched. Nonetheless, she had lovely blue eyes and an adorable face that looked like the faces of the dolls used by young girls to play.

I also used to be a good friend of Kate, one of Zafeiria's friends. She always ended up getting drunk when she went clubbing with her friends. While clubbing, she always lost her coat because she got quite drunk. Like Jana the Refulgent and Natalie, Kate always showed off her bare belly and her navel regardless of the time of the day, the season of the year, or the place where she would be. Moreover, Kate never wore panties and wore trousers with an extremely low rise, so she always showed off the upper part of her butt crack (intergluteal cleft). Her eyes had

the deep blue hue of precious stones. As she was thin, her midriff, her innie belly button, and her buttocks were sexually arousing.

I had a blonde, blue-eyed friend named Jennifer that was lean and had an extremely gorgeous face. She was very pale, so every time I flattered her beauty she blushed, and her cheeks looked lovely pinkish. That made her look cutely pretty. In my lectures, I had a friend that was very lovely named Iona. She had blue eyes. She wore glasses. Her face was cute and comely. She liked wearing knee-high boots and very short miniskirts to show off her slender thighs. To be more sexually attractive, she attempted to imitate the kind of voice used by sexy women in Hollywood films or in television shows. It was the type of voice spoken by actress Kathleen Turner when she voiced sex symbol Jessica Rabbit in the film "Who Framed Roger Rabbit" (1988). What was most unbelievable about Iona was that she almost did not know anything about biology! It was as if she never attended any lectures, but she did.

When we did homework together as team members, I solved everything because she did not know anything about biology. She ended up becoming a dropout when she was a sophomore. Among my classmates, there was also a mysterious young woman that was always wearing a hood that obscured her face and eyes...

Tobacco (*Nicotiana tabacum*) was always a drug linked to partying, clubbing, and socializing. On Sunday the 26th of March 2006, smoking was banned in indoor venues. As a result of this, tobacco use diminished because it stopped being popular. This improved the health of plenty of people.

I frequently went to bookshops to flip through books to have fun. One weekend, I found a very appealing book in a Waterstones bookshop on Princes Street. The title of the book was "Natural Beauties" by Eolake Stobblehouse (2004). It was a coffee (*Coffea liberica*, *Coffea arabica*, or *Coffea canephora*) table book that depicted photos of nude young women. After that, I looked for pornography uploaded by the author of this book onto his website. That is how I started to watch free Internet porn.

Strangely, I had only seen pornography once in my life before the day I flipped through the book on naked women at Waterstones. The first time I saw pornography was when I read a pornographic comic strip in a free magazine full of ads. That was when I ejaculated for the first time in 1998, eight years before. I do not like such pornography that depicts sex or violence. The kind of pornography that I like is simply softcore, just looking at naked women. They are mostly hand-drawn or digitally drawn fantasy characters.

Internet pornography is a multimillion-dollar industry that offers every type of conceivable sexual fantasy to every type of person. When I was younger, it was difficult for young people to watch pornography. Fans of pornography such as Héctor Jaramillo had to purchase hentai manga paperbacks. Other fans, such as Leonardo Soria, had to go to specialized movie theaters to watch pornographic films such as the former Cine Teresa. All of that was expensive. As the Internet became popular, minors were able to access free pornography. This created a different attitude toward human sexuality than the attitudes of previous generations, leading to fewer real-life sexual experiences and a greater probability to end up addicted to porn.

Even if pornography became extremely popular, it was heavily criticized both by people with politically progressive, leftist ideas and by people with right-wing, politically conservative ideas. Progressive critics said that it objectified women, that it promoted sexual assault, and that it many times involved slavery of sex workers. Conservative critics said that it went against the "Torah" commandment that can be read in "Genesis" that states that men should not waste sperm in non-coital sex, as the aim of all sex is to have children. Others said that it goes against the Christian commandment (stated by Jesus in the "Gospel of Matthew") that a man should not feel sexual desire for a woman to whom he is not married. Others said that it goes against the commandment of the "Qur'an," stating women should show modesty by veiling with hijab.

One day, Kirsty told me a peculiar urban legend about my university. She said that if a student dies inside an examination hall at the time students are taking an exam, all the students are immediately awarded the highest possible grade. During the time I was at the University of Edinburgh, no one died while sitting an exam, so I never knew if this story was true or not. Also, Professor Davies told us that there is a human skeleton in the Old Medical School and a pocketbook made of human skin in Surgeons' Hall that are the remains of William Burke, a criminal. When this guy was alive, he killed people and sold their corpses to the University of Edinburgh so that medical students could learn about human anatomy.

Zafeiria had lengthy conversations with me in her bedroom. We talked about society, genetics, neuroscience, and future technology. She claimed that to improve society and solve the great problems that haunt the world, one needed to make use of genetics and genetic engineering. I was deeply impressed by such ideas... Zafeiria was very intelligent. She questioned the ideas that everyone in society assumed were right. Her ideas were rebellious, and she

thought differently than how most people did.

Professor Norman Wilson, my student adviser, set some homework for me so I would do that during the summer. He told me to read the whole "Campbell Biology" textbook (seventh edition, 2004). He told me he would perform an oral exam to check that I learned after I returned to classes. The book was huge, but I managed to read it.

The British Trust for Ornithology, Scotland, organized a census of rock ptarmigans (*Lagopus muta*) in the alpine tundra of the mountains of Scotland. This event was known as Project Ptarmigan. It was done as a test to see whether it was possible to record birds in inaccessible places with the help of mountaineers. I was one of the volunteers in this citizen science project. This was not a census with a simple protocol such as the lists sent to eBird. Here one would need to record precise geographic coordinates each time we changed our straight-line direction. It was truly a formal ecological census. I first went to look for birds at Mount Ben Nevis. As it is the tallest volcano in the United Kingdom, it is a touristy place. It is as touristy as the Mexican tourist trap of Peña Bernal. It is also like the Mexican archeological site of El Tepozteco on Cerro de la Luz! I did not see any ptarmigans, but it was a happy and relaxing hike. At the top of Ben Nevis, one can see a stunning panoramic view of the Scottish Highlands. One can even see from there the Isle of Skye, which is the island where Portree is found. Portree is the town where Candice lived! On Ben Nevis, I saw several snow buntings (*Plectrophenax nivalis*). They were a new bird species for me.

The next place where I went to look for ptarmigans was a mountain that almost no one visited in the middle of the alpine tundra. It was the Carn Ban Mor. I hiked up to the summit and I was able to see and record a couple of ptarmigans, and some Eurasian dotterels (*Eudromias morinellus*). Once I was at the summit, there was a blizzard. It was terrible! The wind was so strong that it removed my hat from my head. It also removed a space blanket that I attempted to wear to protect myself from the blizzard. The cold was too extreme and walking in the snow made it difficult to reach the lower part of the mountain. As it was too cold, my whole body was shivering... I could only see white in front of me, on each side of me, and behind me. That was because there was so much snow in the air due to the blizzard.

As I could not see anything, I was not able to find the right path to exit the mountain. That is because the summit of Carn Ban Mor is above the tree line, as in Scotland, the tree line is too low. As a result of this, there were no trees, so everything was the same and no path was obvious. I was extremely terrified! Soon my nose and all my fingers turned numb. At that time, I was

exceedingly afraid! It was clear that this would end up becoming a health problem and there was still a lot of distance to walk to go down the mountaintop!

In the middle of the whiteness of the snowstorm, I had a mystical experience. I asked that the blizzard would stop, and immediately, a voice answered me. No one was around me, but I still heard it. The divine voice that I listened to told me that the snowstorm would immediately stop and that I would not suffer any health problems. This divine voice is known as bat kol in Hebrew. A minute after listening to the message of the bat kol, the wind stopped and the cloud that was producing the blizzard left. The sky was blue, and the Sun was shining... everything was too strange.

Just a minute before, all the air was white from so much snow and the wind reached an extremely high speed. Suddenly, the atmosphere was peaceful, and no snow was falling. I ran downwards as quickly as possible! My nose and fingers stopped being numb and nothing bad happened. Until that time, I thought that mystical experiences were instances of hypnosis that were spontaneous and involuntary. I thought they were like the voluntary practices that Enríquez taught me, but by far more extreme. When I realized that mystical experiences not only hypnotized human minds, but also the atmosphere that lacks any brain or perception, I started to doubt that they were truly a form of spontaneous hypnosis. During my holidays in the north of Scotland, I also went to the Isle of Mull, to the Isle of Iona, to John o' Groats, and to the Orkney Islands.

My mystical experience at the top of the Carn Ban Mor could be understood as an instance of divine intervention from the point of view of the teachings of Emilio the Sage. I had the experience, and under this paradigm, that is enough reason to infer a cause and a consequence because I was a young man with no personal agendas—I was not attempting to evangelize or to indoctrinate anyone to an ideology. Therefore, I had great credibility. However, from the point of view of Jana the Refulgent, it was not so easy to determine a divine intervention. Firstly, because under the paradigm of Jana the Refulgent, there are other possible ways to explain this. Among these, the most believable one was that I had the mystical experience, and it was a coincidence that the snowstorm stopped immediately afterward. There does not need to be a causal link between one event and the other.

Under this hypothesis, the religious experience could have been produced from an external source to me, be it divine or earthly, or it could have been produced by my own mind. This is what Christian theologian Kierkegaard (1843) referred to as "Abraham's anguish" in "Frygt og Bæven." However, in my experience, I would not call it a source of anxiety. In my experience, I

think this is not important. What is truly important is there might not have been any causal link between my mystical experience and the fact that the blizzard stopped. The hypothesis that entails that there was no causal link is in fact inductively stronger under the paradigm of Jana the Refulgent than the hypothesis that there was a divine intervention to save me.

This is because, according to Occam's razor, the version in which it was just a coincidence infers a smaller possible set of phenomena than the version that includes a divine intervention. If you want to read about Occam's razor, please read the book by Occam titled "Quaestiones et decisiones in 'Quattuor Libros Sententiarum Petri Lombardi'." A believer in logical positivism such as the many anti-pseudoscience activists that plagued the 2000s would be satisfied by the explanation that is inductively stronger according to Occam's razor and the reasoning would stop there. Nevertheless, under the paradigm of Jana the Refulgent, all possibilities must be considered, not only the one that is inductively more probable. To be able to know what alternative was the correct one to explain this event, one should perform a controlled experiment to test the phenomenon. As it is impossible to replicate that situation because it was too dangerous, such an experiment would not be feasible. Hence, under the paradigm of Jana the Refulgent, one must reach the conclusion that all explanations are possible. This means that one must have a Pyrrhonist equipollency with respect to this. Moreover, that one should not have blind faith in any of these hypotheses. One should not have faith either in the hypothesis that involves miracles or in the hypothesis that involves random coincidences. The sensible view of Jana the Refulgent that was not categorical was, of course, more appealing to me at that time.

Jurisprudence

Cambridge Arts & Sciences will always have a special place in my heart because I lived there at an extremely happy time. I was surrounded by extremely beautiful and sexy girls at a time when girls and young women showed off their bodies more than at any other time in European civilization. This was thanks to the oversexualized female fashion of that golden age. The best thing about that time was that it was then that I learned the central dogmas and axioms of Jana's teachings. As such teachings were developed and practiced in such a beautiful environment, they were focused on love, positive thinking, and the beauty of life. Cambridge Arts & Sciences was a place that was full of beauty, but the teachings of Jana the Refulgent involve looking for beauty and finding it everywhere, in all places, in all activities, and in all possible thoughts. The teachings of Jana the Refulgent entail

learning to live in a perpetual state of being in love with life, wisdom, and the Universe. Therefore, it is a doctrine that dignifies the spirits of such people that live following its path.

The illness of Arévalo demonstrates that Jana the Refulgent was right regarding her belief that the physical laws of the Universe are objective, and one is potentially able to know them. If what Jana the Refulgent said is true, then reality outside of our body is objective and it does not depend on our perception. Hence, if we have a faulty perception of reality, we live in a self-delusion. The reason why Arévalo showed that this is true is because if the subjective perception that we have about the world truly creates reality, as 18th-century idealists claimed, then Arévalo would not have been mentally ill. The things he claimed to perceive would have modified the Universe to match what he was perceiving. Then, he could have shared such reality with other people that were close to him. After all, idealism in a way states that we create our own reality. This means that reality is not objective, but that our perception creates reality.

However, Arévalo's illness shows us that even if he totally believed with blind faith in what he said, the Universe was not modified according to his views. This is evidence against such people who claim that our mere belief systems or our faith can produce miracles by directly interacting with the Universe. If what they say were true, all mentally ill people with psychotic symptoms would be as miraculous as prophet Moses, Jesus, Apollonius of Tyana, or maybe even more than them, because their unbreakable faith in their deranged ideas would modify the Universe in amazing ways.

This conclusion, of course, challenges a lot of the axioms of Emilio the Sage, but he did not necessarily believe that people modify the Universe in miraculous ways. He did not entirely believe in this hypothesis. That is why Emilio the Sage accepted that mental illness could exist, and that magic has its own laws and boundaries. Thus, the metaphysics of Jana the Refulgent were not as incompatible with the metaphysics of Emilio the Sage as it seemed.

I finally was not accepted by the University of Cambridge, so I joined the University of Edinburgh. Nevertheless, the learning process of how to attain good grades was something better than if I had been accepted by the University of Cambridge. It was something even better than having been accepted by the University of Edinburgh, something that I achieved thanks to that method of studying. The reason is that having knowledge of study strategies, having a love for wisdom, and having an iron discipline is by far more important for life than any bachelor's degree from any university of the world. Therefore, the message of Jana the Refulgent was by far

more important than any bachelor's degree. I shall now explain why.

The knowledge that we learn from a bachelor's degree in biology is very narrow and specific for a few natural sciences. With this knowledge, we cannot build skyscrapers. Then we could think that a bachelor's degree in architecture is much better than a bachelor's degree in biology because it teaches us to build skyscrapers. Nonetheless, it does not matter if we study a bachelor's degree in architecture, because it does not allow us to design airplanes. Then we could think that a bachelor's degree in aeronautical engineering would be the best one. However, this would not teach us how to make classical music...

As a conclusion, there is no bachelor's degree that can teach us something that can be useful for everything in life. In contradiction, the teachings of Jana the Refulgent can be applied to absolutely everything in life. This is because these techniques can be used to learn almost anything. Thus, they were more valuable than any other possible education. They were more valuable than a formal course on learning techniques because these courses only focus on human reasoning as it pertains to studying more. They exclude the emotions. Jana the Refulgent did not exclude the emotions. She educated both my reason and my emotions. As a matter of fact, in modern times, I consider myself more as a philosopher than as a biologist, because Jana the Refulgent taught me to love wisdom. This is an example of how our emotions are educated, not only our rational cognitions, as love is more an emotion than a way of thinking. As it is written in the "Dialogues of Plato" regarding philosophers, Jana the Refulgent transformed me into a lifelong student, someone who is always going to be learning new stuff because of my love for wisdom.

Sybille decided to take care of her mental health more than anything else by choosing stress avoidance rather than attaining prestige in a stressful top university. She is an example we all ought to follow because nothing is worth more than our health. That is the same reason why Jana the Refulgent said it was good that I was not accepted by a university that would be too stressful for someone with my math ability at that time.

Even though Jana the Refulgent valued self-sacrifice, according to her, self-sacrifice should have certain boundaries. One should be ready to sacrifice subjective goods such as pleasure for a great aim. But this does not mean that we must sacrifice objective goods such as health for a great aim. We must sacrifice what is subjective, not what is objective. One could argue that health is not something objective, as its definition varies in different cultures. Nonetheless, there are maladies that are universally seen as a loss of health. These types of maladies are the ones we must avoid in our self-sacrifices. We

must remember that we sacrifice something to obtain something better, not to attain something worse. Stress and all its effects are often worse than any other reward that life can give us. Moreover, Sybille was hot and sexy!

Even though Jana the Refulgent did not believe in magic or in necromancy, the weeks devoted to Jana the Refulgent are highly useful to face these arts. Indeed, they also help us to face evil people. A reason why many people undergo moral decadence is that they give into temptation. Evil people always offer us rewards in exchange for misbehaving. That is how they attempt to make us like them. The discipline of the weeks devoted to Jana the Refulgent avoids our giving into temptation. To use it in this way, we need to see the temptations as if they were unwanted desires while we are revising for an exam. By unwanted desire, I mean any other activity that we wish to do in the immediate days before an exam that would not allow us to get the best grade possible in the exam that we are about to take.

The best strategy to avoid being defeated by evil is to be trained in defeating temptations. There is no better training in defeating temptation than the weeks devoted to Jana the Refulgent used to revise for an exam. Now, I shall discuss the topic of necromancy. It works in a very weird way. Whoever has not consciously suffered it would not fully understand it. As it would be futile to explain to those who have not experienced it, I will briefly outline it: Necromancy is also based on temptations. In this case, they are not the kinds of temptations that someone offers to us to corrupt us. They are neither those ideas that most people tell us are good values when, in fact, they are vile behaviors. The sort of temptations produced by necromancy are desires that we apparently have and that activate curses in our lives. These desires seem to come from us, and it seems they do not have an external source, but they are traps.

Hence, we also need to defeat such temptations that apparently come from our own free will, not just the ones offered by people that surround us. Jana the Refulgent did not believe that there were demons able to control our minds. That was something that made her different from both Emilio the Sage and Mariana. But she thought that our own mind can have ideas that are deleterious for ourselves. Indeed, as it was said by Enríquez, the lawgiver: “Sometimes our worst enemy is found within ourselves!”

Professor Deacon’s course was exceedingly good. According to Jana the Refulgent, art is a sublime projection of the soul. Professor Deacon never taught us a fixed style. He taught us the artistic technique of drawing with a pencil, but the style that we used to depict the creatures was always our own style. When marking the sketchbooks, he never graded the style, only the technique.

Thus, according to the teachings of Jana the Refulgent, Professor Deacon was allowing our soul to flow, to end up being reflected in our sketchbooks as the organisms that we drew. Such sketchbooks were mirrors of our souls outside of our own body. We do not need to believe in New Age superstitions to believe that the soul can leave the body at certain times; genuine art that is not bound to a compulsory style is free expression from our soul. In a metaphorical way, every time we produce art like this, we allow our souls to leave our bodies to reflect themselves in the works that we perform.

The teachings of the Christian churches do not justify the hypocritical behavior of Birgitta the First. She preached the "gospel." On the other hand, she spent all her life hating her fellow humans instead of loving them as much as herself. In the "Torah," there is a commandment in the "Leviticus" that states: "You shall love your neighbor as yourself." Jesus considered that it was the second most important commandment. We may think that what Birgitta the First did was not immoral. However, she was logically inconsistent. That is because one should not say that one is a Christian and at the same time not living according to the teachings of Jesus because that is a contradiction. Jana the Refulgent thought that logical consistency is very important in our lives. Logical consistency means that an object, idea, or variable cannot be "A" and "Not A" at the same time. According to Jana the Refulgent, a fair civil or criminal law should not be inconsistent. In the same way, if we postulate a political theory or our own system of values for our daily life, we should not be inconsistent. We ought to get rid of any inconsistencies to avoid the structure of our philosophy being easily shaken or destroyed.

My mystical experience on Mount Carn Ban Mor shows that the world is more mysterious than how we imagine it is. We cannot say that we can fully know everything regarding reality with the current state of science and technology. That is why Jana the Refulgent thought that we should not have inflexible dogmas such as categorical metaphysical beliefs, because even if we think that we are right, we need to accept we may be mistaken at times. What I just said may seem like a logical fallacy, in particular, the argument from ignorance (argumentum ad ignorantiam). It is not. I am not saying that because we still do not have a complete scientific explanation regarding how the Universe works, any metaphysical hypothesis is necessarily true. What I am saying is that because we do not have a complete scientific explanation regarding how the Universe works, we ought not to believe that there is a single explanation to model it correctly or that what we believe is a perfect theory.

My mystical experience on Mount Carn Ban Mor shows that not only can our trivial opinions about human relationships in our

daily life be mistaken because of epistemological deficiencies, but even the metaphysical beliefs of our worldview, regardless of being scientific or spiritual, might be incomplete. Hence, we must be ready to reconsider our ideas in case they are insufficient to explain certain phenomena that we may perceive during our lives.

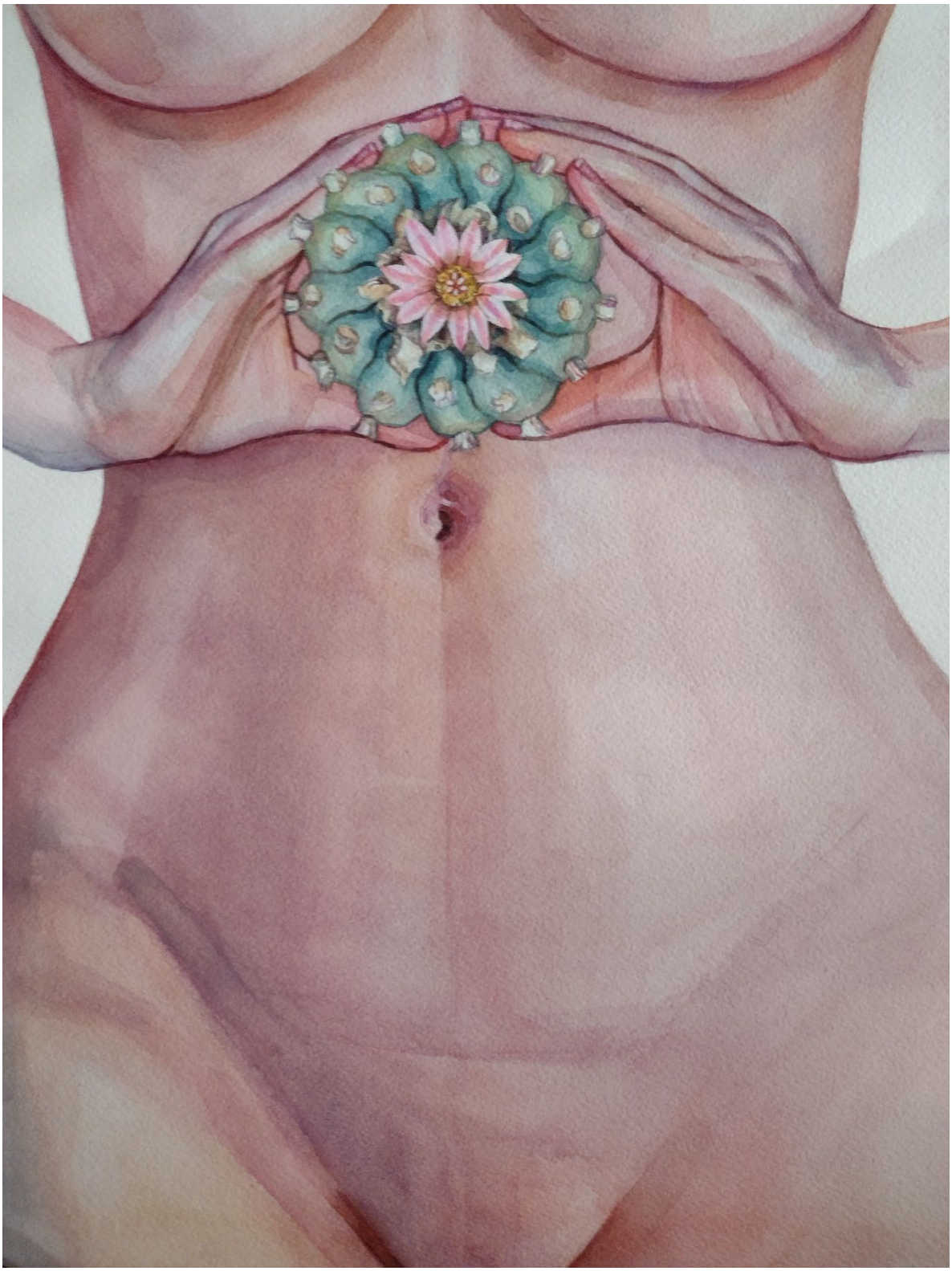
CHAPTER 19. *LOPHOPHORA WILLIAMSII*

The species of cacti that belong to the genus *Lophophora* are known as peyotes. They contain a hallucinogenic drug known as mescaline ($C_{11}H_{17}NO_3$). The Wixárika are a Mexican Indigenous ethnic group. They became famous for their annual pilgrimages to Wirikuta, where some of them go to ingest peyote (*Lophophora williamsii*) for religious reasons. This attracts plenty of tourists who want to get high. Some say this is wrong, a form of cultural appropriation that can end up killing most peyotes and thus depriving the Wixárika of their rituals. I say most peyotes and not all of them because this would only extirpate the species *Lophophora williamsii*. The other species found near Wirikuta, *Lophophora alberto-vojtechii*, is too tiny and too subterranean to be detected by either the Wixárika or tourists. It also does not have enough mescaline to satisfy them.

Ramón Vargas has lived a strange life. He was my physics teacher when I was a kid and a teenager at the time I was living in Mexico. Years before I met him, his fiancée died in an accident when they were rock climbing. He was extremely sad because the young woman he loved died. Hence, he became a wanderer who attempted to mitigate his emotional pain by tiring himself out via solo all-day walks, only stopping to eat and sleep. After spending entire days walking while thinking about his dead lover, his life, and the Universe, he realized it was a spiritual path. So, he went on foot all the way to the north of Mexico, to the desert. He reached Wirikuta, the place that is important in the creation myth of the Wixárika. There, he tasted the famous peyote. In his hallucinogenic visions, he saw whales. Then, he thought the whale was his "spirit animal," so he traveled on foot on a spiritual quest to Baja California to see wild whales (*Eschrichtius robustus*). He did find them.

Unlike the Wixárika, Ramón Vargas did not take peyote to pray for rain so his maize (*Zea mays*) could grow well. He was not even a farmer. The Wixárika do not look forward to seeing a personalized spirit animal that they afterward need to seek in real life. The deer (*Odocoileus virginianus*) is one of their Deities, and cattle (*Bos taurus* & *Bos indicus*) are one of their main sources of income. They are not personalized spirit animals. There are baleen whales in Nayarit (*Eschrichtius robustus*, *Megaptera novaeangliae*, & *Balaenoptera brydei*). However, the whale is not important in Wixárika religion.

Now I will tell an anecdote that happened to Ramón Vargas, and that I witnessed when I was 14 years old. In 1999, the diabolical school administrators of the Mexican school I attended invited a biologist that is a



***Lophophora williamsii* (Lemaire ex Cels, 1842) (Caryophyllales: Cactaceae)**

Illustration made by Yuliia (Monde_Lumineux). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 861.**

university professor to give a talk on astrobiology. His name is Antonio Lazcano. Over many weeks before the lecture, all our schoolteachers kept saying that the talk would be a once-in-a-lifetime experience because according to them, Professor Lazcano was one of the wisest humans all over the world. The administrators hired the movie theater Maxcinema Pecime for the lecture. (Maxcinema Pecime does not exist anymore. That building now belongs to the Instituto Nacional de los Pueblos Indígenas, a governmental institution.)

The whole school went to the lecture. Emilio the Sage and Verónica Jiménez were in the audience. The lecture was about the solar system and the search for extraterrestrial life. Lazcano's rhetoric was as flawless as that of Quintilian! He was well-known among all Mexican biologists. On the other hand, my physics teacher Ramón Vargas was only known by my schoolmates. Ramón was worshipped by many of his students as the wisest man. Ramón was envious of Lazcano's reputation and was afraid his followers would think Lazcano was better than him. To protect his reputation, he planned to shame him, so during the question-and-answer session, Ramón delivered a complex speech followed by difficult questions that he wanted Lazcano to answer. He was not able to answer them. Ramón acted unfairly because, as you know, it is easier to get a good grade in biology than in physics. Physicists know difficult stuff. In that way, Ramón made Lazcano look ignorant in the eyes of the students and schoolteachers.

As in that lecture, I will now deliver an account of the Universe from the point of view of biology. I will go all the way from galaxies to subatomic particles and everything that is found in between. This essay is needed because the next chapters of this book, as well as appendices C and G, have a lot of scientific content, so I will now write down the principles of earth sciences, biology, and medicine so you can understand them. This essay will not be technical, so it will not be like the book titled "Philosophiae Naturalis Principia Mathematica" by Isaac Newton (1687), that is only understood by specialists. My essay will rather be like the book by Robert Chambers (1844) titled "Vestiges of the Natural History of Creation." It will be written as science journalism to be understood by anyone. Furthermore, it will not contain any equations. Fortunately, unlike Lazcano's talk, this is a written work, so no smartass such as Ramón Vargas will attempt to outsmart me! As this chapter is an essay, it is very similar to Chapter 1. Nevertheless, this is not about the works of humankind. This is about the works of nature. Let us start with the Universe.

According to researchers, the Universe started with an explosion known as the Big Bang. Light travels in the Universe as quanta known as photons. Their direction of

motion can be curved by gravity. This shows us that gravity is a curvature in spacetime. In astronomical objects, mass is directly proportional to the amount of gravity exerted. Black holes have so much mass that they create a deep curvature in spacetime. All objects that have other objects orbiting around them curve the spacetime enough to allow the objects that have a lesser amount of mass to orbit them.

There are many galaxies in the Universe. Galaxies have many stars, but not all stars are found within galaxies. The Sun is a star found within a galaxy known as the Milky Way. The Sun orbits around the center of mass of the galaxy. Many astronomical objects orbit the Sun. The Sun and all objects that orbit it are known as the solar system. The most noteworthy planets and minor planets in direct orbit around the Sun are Mercury, Venus, Earth, Mars, Ceres, Jupiter, Saturn, Uranus, Neptune, Orcus, Pluto, Haumea, Quaoar, Makemake, Gonggong, Eris, and Sedna. The Earth takes a year to complete a whole cycle of its orbit around the Sun. The Moon orbits the Earth. Meteorites are rocks that fall from outer space. They provide us with a lot of information regarding the chemical composition of the planets and asteroids from which they come.

People have always been fascinated by the probability that there may be extraterrestrial alien civilizations. Indeed, science fiction started during ancient Roman times when Lucian of Samosata wrote a novel about wars between alien civilizations titled "A True Story." In "Allgemeine Naturgeschichte und Theorie des Himmels" (1755), philosopher Immanuel Kant stated that there are plenty of alien civilizations in our solar system. In the 19th century, Nikola Tesla thought Martians broadcasted radio signals that could be detected from Earth. You can read about this in the article titled "Nicola Tesla Promises Communication with Mars." It was published in "The Times (Richmond, Virginia)" (January 13, 1901). Unfortunately, there are no alien civilizations in the solar system. People have also looked for microbial life on Mars, but so far, they have not found anything like that either. As extraterrestrial life has not been found, some astrobiologists study how life may have originated. Other astrobiologists study the physiology of earthlings that can survive extreme conditions such as the tardigrade *Hypsibius exemplaris*.

The Earth is composed of several parts: an atmosphere, a hydrosphere, a crust, a mantle, an outer and inner core, and a biosphere. The atmosphere is attached to the Earth due to its gravity. It has many gases, mostly nitrogen (N_2), oxygen (O_2), and argon (Ar). The hydrosphere is all the water (H_2O) found on planet Earth. A larger surface area of this planet is covered by water compared to dry land. The Earth's crust is the region of solid rocks found

beneath the atmosphere and the seas. It is composed of minerals that combine with each other to form rocks. Some minerals are highly pure and are not found forming rocks. These often form beautiful crystals such as diamonds (C), native gold (Au), rubies (Al_2O_3), emeralds ($Be_3Al_2(Si_6O_{18})$), and jadeite ($Na(Al,Fe^{3+})Si_2O_6$). Some elements are not found in visible minerals, but only microscopic traces of them are found. This is common in the case of many lanthanides.

Most people believe minerals are necessarily stones, but that is not always the case. For example, the naturally occurring ice (H_2O) in glaciers is a mineral. Even some crystals composed of organic molecules are minerals. You might be surprised to know that guanine ($C_5H_5N_5O$) can be a mineral. It was first described as a mineral found in fossil guano deposits defecated by guanay cormorants (*Leucocarbo bougainvilliorum*) in old times. It is indeed a mineral when it is found as a fossil. The Earth's crust is full of fossilized remains of organisms that formerly were alive. Petroleum, a fossil fuel, is so valuable that people fight wars to get it. Fossils are important in geological studies. Some fossils are only found in certain strata and that helps to date the period when such strata were formed. For example, the foraminifera *Cyclammina acutidorsata* is found only in Oligocene-Miocene strata.

In 2005, I was in a museum with my then girlfriend Natalie. I showed her a sculpture model that was a reconstruction of a giant fossil spider. Natalie was so afraid of it that she hugged me. I liked to hug her, but her fear was in vain because two months later, a paper was published that showed that *Megarachne servinei* was not a scary spider, but a good-looking aquatic eurypterid. So that model that scared Natalie was wrongly reconstructed. The paper that showed this was written by Selden et al. (2005) and it is titled "The True Identity of the Supposed Giant Fossil Spider *Megarachne*." It was published in "Biology Letters" 1(1): 44–48.

Below the Earth's crust is the mantle. It is also made of solid rocks, but it slowly flows due to its viscosity. This capacity to transport heat and rocks produces part of the movements that have modified the shapes of the continents. The mantle is very warm, but it has so much pressure that it is solid. Some regions of low pressure allow rocks to melt—that is the lava that comes out from volcanoes. Wizard Empedocles was killed by the lava of Mount Etna, and naturalist Pliny the Elder was killed by the volcanic gases of Mount Vesuvius that he inhaled. Below the mantle is the Earth's outer core. It is said to be liquid, made of molten metal. It is thought that the Earth's inner core is solid and intensely high in temperature. Some people believe it is made of a native iron-nickel alloy, which is like the metal found in siderite meteorites.

The biosphere is the part of the Earth that is inhabited by living beings. There are

underground tiny creatures living in the Earth's crust. Most of them are single-celled. For example, the bacterium that belongs to the candidate phyla radiation (CPR) and is known as '*Candidatus* Parcunitrobacter nitroensis' lives in an aquifer in Rifle, Colorado, United States of America. CPR sounds strange, but it is simply the name of a group of bacteria. Please see the glossary to know what "*Candidatus*" means.

The sea is inhabited by all sorts of creatures. The largest animals are found in the sea. For example, the lion's mane jelly (*Cyanea capillata*) can measure 37 m long, and the bootlace worm (*Lineus longissimus*) can measure 55 m long. Some people believe that life originated in the sea, but others believe that it came from outer space in meteorites.

The land is covered by plant life. Some creates lush forests. However, some land areas, such as Antarctica or deserts, are poor in plant life. The largest Archaeplastida are found living on land. For example, the coast redwood (*Sequoia sempervirens*) can measure 116 m tall, and the Himalayan cypress (*Cupressus torulosa*) can measure 102 m tall.

There are many fungal spores and bacteria in the atmosphere sent there by wind currents. They often travel long distances before falling to the ground. The atmosphere is also used by migratory animals to transport themselves through flight. For example, some MacQueen's bustards (*Chlamydotis macqueenii*) that breed in China fly to Turkmenistan to spend the winter there.

During the Middle Ages, Christian Europeans had a totally different cosmology. They thought that below the Earth's crust was Hell, a place where sinners were punished. They also theorized that the Moon, Mercury, Venus, the Sun, Mars, Jupiter, and Saturn surrounded and orbited the Earth. They thought the stars were found beyond the orbit of Saturn. Finally, beyond the stars they thought was Paradise, where the souls of the virtuous dwell. In the 14th century, Dante's "Divine Comedy" was written using this cosmology. In 1616 the Catholic Church banned Copernicus's books for challenging this cosmology. If you want to read bizarre but amazingly artistic 21st-century scholastic philosophy, please read the paper by Buonanno and Quercellini (2009) titled "The equations of medieval cosmology" that was published in "New Astronomy" 14(3): 347–348. You might think I am wrong, that scholastic philosophy was medieval, not modern. You have not read that paper...

Now I shall return to the topic of modern science and focus on the biosphere by discussing the biological levels of organization. Living beings are composed of many atoms. Most of them are atoms of the following chemical elements: hydrogen, carbon, nitrogen, oxygen, phosphorus, and

Agnese, Zafeiria, and Saba Drawing Plants in the Arid Lands House of the Royal Botanic Garden Edinburgh

Illustration made by Karolina Heikura (Larienne). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 861.**

sulfur. An early atomic theory was devised by pre-Socratic philosopher Leucippus and by his disciple, Democritus the laughing philosopher. They thought atoms could not be split. However, in the 19th century, J. J. Thomson found out that electrons are part of the atoms of the following elements: aluminium, iron, copper, tin, platinum, and lead. Later, in the 20th century, Ernest Rutherford and his colleagues were able to "split" the atom and found that it also has protons. They first discovered that nitrogen atoms have protons. Later, thanks to the work of many researchers, it was found that the atoms of lithium, beryllium, and boron have neutrons. By studying all known atoms, it was found that all of them are composed of protons and electrons.

Except for hydrogen, all atoms also have neutrons. Atoms have positively charged protons in their nucleus. The number of protons tells you the element. For example, if, and only if, an atom has 30 protons, it is a zinc atom. Atoms sometimes also have neutrally charged neutrons in their nuclei. Its number tells you what radioactive isotope you have. Around the nucleus there are electrons. These are negatively charged. Chemical bonding between atoms is produced by electrons. Chemical bonds include ionic bonds, hydrogen bonds, covalent bonds, and metallic bonds.

When two or more atoms bind to each other, they produce molecules. Some organic molecules are very large and are known as macromolecules. Living creatures are composed of the following macromolecules: carbohydrates, proteins, lipids, and nucleic acids. For example, the cell walls of the cycad *Ceratozamia chimalapensis* are made of cellulose, a carbohydrate; its molecules known as photosystem II are protein complexes; its endomembrane system has phospholipid bilayers; and its nuclear genome is encoded in deoxyribonucleic acid (DNA), a nucleic acid. Living creatures also have plenty of tiny molecules within their bodies. Some of them are necessary for metabolism to happen. These chemical species include water, hydronium cations ($[H_3O]^+$), chloride anions (Cl^-), and several metal cations (Na^+, Mg^{2+}, K^+, Ca^{2+}, &c.). For example, the moss *Wijkia carlottae* has cupric cations (Cu^{2+}) in its cytochrome c oxidase. This enzyme is essential for aerobic respiration. Also, in living beings, we can find shells, skeletons, and extracellular matrices which can be made of hard minerals that create strong structures. For example, the radiolarian *Challengeron diodon* has a skeleton made of silica (SiO_2). Another example is the sea snail *Lambis robusta* that has a shell made of aragonite ($CaCO_3$).

A cell is a living being comprised by a lipid membrane with cytoplasm inside of it. Its shape is maintained by a system of proteins known as the cytoskeleton. Cells carry out several chemical reactions that allow them to

be alive. For example, the cryptomonad alga *Cryptomonas erosa* performs photosynthesis. Stereotypically and usually, cells are so small that one cannot see them. Some of them are indeed tiny, such as the bacterium *Agrobacterium tumefaciens*. However, other ones—such as the chlorophyte alga *Caulerpa taxifolia*—are so big that you do not need a microscope to see them. Some cells are nucleated. The organisms with nucleated cells are said to be eukaryotes. For example, the red alga *Cyanidioschyzon merolae* has a cell nucleus, so it is said to be a eukaryote. Some cells do not have a nucleus. Such cells are said to be prokaryotes. For example, the archaeon *Halorubrum lacusprofundi* is a prokaryote because it does not have a cell nucleus. Some living creatures like the yeast *Schizosaccharomyces pombe* are single-celled, thus they are said to be unicellular. Some living creatures like the Indian knifefish (*Chitala chitala*) have many cells, thus they are said to be multicellular.

Multicellular living beings often have cells organized in tissues. For example, amphibians like the Thompson's caecilian (*Caecilia thompsoni*) have blood flowing through their arteries and veins. Blood is a tissue.

Tissues make up organs that are engaged in specialized functions. For example, the stomach of a giant otter shrew (*Potamogale velox*) is engaged in digestion and its lungs in breathing.

Organs that share a similar function often work together as part of organ systems. For example, in lizards such as the western blue-tongued skink (*Tiliqua occipitalis*), its skull, its vertebral column, its thoracic girdle, its pelvic girdle, its sternum, its ribs, and its limb bones are part of its skeletal system.

Several organ systems are part of a single organism. For example, birds such as the helmeted hornbill (*Rhinoplax vigil*) have the following organ systems: integumentary, digestive, respiratory, reproductive, exocrine, endocrine, immune, nervous, circulatory, urinary, muscular, and skeletal. However, some organisms, like the apicomplexan *Plasmodium falciparum*, do not have any organs because they are very simple. Most organisms on this planet are single-celled, so being composed of organs is not as common as one might imagine.

Systematics allow us to discover new species of organisms and to know their evolutionary relationships. For example, in 1975, an herb that no one knew of before was found in Asir, Saudi Arabia. It was sent to King Saud University Herbarium, Riyadh. Thanks to systematics, it was named *Hypericum collenetteae* in 1993. This study allows us to know that it exists because it was published. This study also distinguishes it from similar species and reveals that it is a relative of St. John's wort (*Hypericum perforatum*—a medicinal plant). This is how biodiversity is catalogued. You can read more about this example in the paper by Robson (1993)

titled "Studies in the Genus *Hypericum* L. (Guttiferae) 6. Sections 20. *Myriandra* to 28. *Elodes*." It was published in "Bulletin of the Natural History Museum. Botany Series" 26(2): 75–217. If you want to learn more about systematics, please see my classification of non-bacterial cellular organisms in Appendix I.

Several organisms of the same species form populations. For example, the population of slime molds *Dictyostelium discoideum* in a mixed hardwood forest includes all the individuals of the species living there.

Populations are part of ecological communities. An ecological community comprises all living beings within the same environment. For example, the bacterium *Sulfurimonas autotrophica*, the archaeon *Methanothermococcus okinawensis*, and the squat lobster *Shinkaia crosnieri* are part of the same ecological community, as all of them are found in the same hydrothermal vents.

Ecological communities together with non-living parts of the landscape are parts of an ecosystem. For example, the *Uapaca* forest is not just comprised of organisms such as elephant's foot plants (*Pachypodium rosulatum*), mushrooms *Afrocantharellus platyphyllus*, and landibe moths (*Borocera cajani*). The rocks and the soil are also parts of it.

Ecosystems are part of biomes. This is true, but biomes are social constructs, as ecosystems are grouped together by humans in biomes according to Western scientific principles. For example, the Russian ecosystems found within the Mongolian-Manchurian grassland, the Daurian forest steppe, the Selenge-Orkhon forest steppe, the Sayan intermontane steppe, the South Siberian forest steppe, the Kazakh forest steppe, the Kazakh steppe, and the Pontic steppe are part of the temperate grasslands, savannahs, and shrublands biome.

Finally, biomes are part of the biosphere. For example, the coral reef biome is part of the biosphere.

Scientist James Lovelock thought that the biosphere behaves as if it were a superorganism. He wrote this in his book "Gaia: a new look at life on Earth" (1993). This may be true, but in 2000, my friend Mariana misunderstood that theory. She believed the whole biosphere was a single creature. That led Mariana to believe that the biosphere has a "central organ" that controls and coordinates all other "organs," in the same way all vertebrates and some protostomes have brains. It is obvious that Mariana's hypothesis was utterly wrong! Mariana claimed the biosphere's "brain" provides the biosphere with sentience. She said it is found inside the underground cave beneath the Pyramid of the Sun in Teotihuacan, that it is made of a ghostly, spiritual "ectoplasm," and that I had to go with her to visit it. Mariana claimed the

"brain" was found within the chamber at the end of the cave.

The shape of that cave somewhat looks like a crustacean nerve cord with a crustacean brain at the end of it, but that does not mean it is the biosphere's central nervous system! Mother Earth is not a shrimp (*Penaeus vannamei*). Our beloved mother cannot simply be a shrimp! In 2000, Mariana was kicked out of Museo de la Cultura Teotihuacana, the Teotihuacan museum, because she was misbehaving there. Everything she said about the cave is false, but you can read reliable information about it in the paper by Heyden (1975) titled "An interpretation of the cave underneath the Pyramid of the Sun in Teotihuacan, Mexico." It was published in "American Antiquity" 40(2): 131–147.

Now I shall discuss humankind. Humans are animals. This means non-amoebal multicellular organisms that lack cell walls. The animals include the comb jellies, the sponges, the Placozoa, the cnidarians, the Xenacoelomorpha, the hemichordates, the echinoderms, the lancelets, the tunicates, the vertebrates, the gnathostomulids, the arrow worms, the Micrognathozoa, the rotifers, the gastrotrichs, the Orthonectida, the Dicyemida, the flatworms, the Cycliophora, the entoprocts, the lamp shells, the horseshoe worms, the bryozoans, the ribbon worms, the annelid worms, the mollusks, the priapulids, the kinorhynchs, the Loricifera, the horsehair worms, the nematode worms, the tardigrades, the velvet worms, and the arthropods.

Humans are vertebrates. This means animals with skulls and vertebral columns. The vertebrates include the jawless fishes, the cartilaginous fishes, the ray-finned fishes, the coelacanths, the lungfishes, the amphibians, the mammals, the lepidosaurs, the turtles, the crocodilians, and the birds.

Humans are mammals. This means that the females produce milk to feed their newborn children. Mammals also have three auditory ossicles in their middle ear: the malleus, the incus, and the stapes.

Evolutionary biologists have metaphorically said that "birds are glorified reptiles." That is because birds evolved from basal diapsids. These creatures were, in fact, the ancestors of modern tuataras, lizards, snakes, turtles, and crocodiles. In the same way, I metaphorically think that humans are mentally ill apes. Humans share common ancestors with New World monkeys, apes, and Old World monkeys. Once upon a time, a whole species of apes went mad and started to behave strangely. That is humanity.

It will be especially important for you to know about human anatomy and physiology because Chapter 24 includes my experiences in labs that require you to know about the immune system and the central nervous system. Thus, I shall now write down the required background knowledge.

The most beautiful human body part is the integument. This is the skin and keratinous structures such as hair and nails. The integument is so attractive that Greeks and Romans displayed heroic nudity in their art. Except the eyes, which are also lovely, all the rest of the human tissues we see without looking inside the human body are part of the integument. In the integument there are a lot of bacteria, prokaryotic archaea, fungi, and viruses that help humans as symbionts or simply live there as commensals.

The skin is full of sensory receptors that allow us to sense our environment. The eyes are also engaged in sensing, and thanks to them, we can see! Specialized proteins in our nose and tongue allow us to have chemoreception. We hear thanks to our ears. Equilibrium is coordinated in the vestibular system that is inside our inner ears. Intrafusal muscle fibers and Golgi tendon organs allow us to have proprioception. The human brain produces thoughts and controls the movement of various body organs. Neurons send information by changes in voltage along their axons or dendrites. These changes in electric potential are known as action potentials. Synapses can be electrical or chemical. Chemical synapses use molecules known as neurotransmitters. Psychology is the study of behavior and how the mind works. The brain mechanisms that produce thinking, creativity, and memory are still pretty much a mystery, so a lot of research is still needed.

Science popularizers have an infatuation with evolutionary psychology and consciousness research. However, these disciplines have contributed less to medicine than most other behavioral sciences. The spinal cord, part of the central nervous system, is connected to many organs by nerves. The movement of skeletal muscles is controlled by nerves. This allows people to move. Muscles move by hydrolyzing adenosine triphosphate (ATP) with enzymes known as myosin heads that trigger muscle contraction. Skeletal muscles are attached to the human skeleton. The skeleton is mostly made of a mineral produced by the human body known as hydroxyapatite ($Ca_5(PO_4)_3(OH)$). Hydroxyapatite tends to last longer than other body parts after humans die, so the skeleton is the most likely part of a dead body a person would see. Therefore, many people are afraid of skeletons and think they are haunted. That is why they are Hallowe'en symbols.

Humans eat using their teeth and mixing food with saliva. Then food travels through a long organ known as the esophagus down to the stomach where it is digested using enzymes and hydrochloric acid (HCl). It then goes to the intestines. The pancreas produces enzymes that act on the nutrients. In the intestines, nutrients are absorbed by the human body. Nutrients move in the

blood through the portal vein from the intestines to the liver, where they are processed to be used by the human body. As the integument, the colon is also inhabited by symbionts and commensals. They are bacteria, prokaryotic archaea, parabasalids, diplomonads, retortamonads, stramenopiles, amoebae, fungi, and viruses. Good bacteria are so important for human health that a patient gets antibiotic-associated diarrhea caused by *Clostridioides difficile* when good bacteria are killed.

People breathe air through their nostrils, and the air travels through the pharynx and larynx to the trachea. At the end of it, the air flow splits into two bronchi leading to the lungs. The lungs have plenty of alveoli where oxygen enters the body and carbon dioxide (CO_2) is removed from the body. The oxygen that crosses the epithelia of the alveoli travels in the blood through the pulmonary veins to reach the heart. In the heart, oxygen-rich blood is pumped to all the body through arteries and arterioles. The interstitial fluid that comes out from capillaries provides nutrients and oxygen to the body's tissues.

Blood returns to the heart through the veins. The heart pumps it to the lungs, so carbon dioxide leaves the body and oxygen is obtained. To maintain the balance of electrolytes, and to get rid of body waste, blood is filtrated in the kidneys. Urine is sent to the bladder, and it exits the body through the urethra.

In 2003, Jana the Refulgent told me about her favorite topics in her biology classes. They were the menstrual cycle, sexual reproduction, and embryonic and fetal development in humans. She loved them because they allowed her to know the female body, her own body. They also allowed her to know the reason why sex exists, and why it is important. Jana the Refulgent thought sex rules a lot of our more fascinating and most enjoyable behaviors and experiences, such as falling in love and the desire to fuck our loved one. She also thought it was amazing how people were created inside the female body.

It is indeed interesting how one cell grows and divides into multiple cells which create strange shapes that end up looking human. Men ejaculate spermatozoa through the urethra when they have sex. Women never eject their secondary oocytes through the urethra, but indeed send them to their uteri. In case the ovum was able to fuse with a spermatozoon, a child grows inside the uterus. At some point, the developing child has a tail and gill-like openings known as pharyngeal slits. Later, the baby looks like a very tiny doll that grows until it gets big.

Such a child later leaves the female body through the vagina. The child is linked to the placenta by an umbilical cord and the scar left behind becomes the navel. The belly button was once considered to be the center of the body by the ancient Greeks. That is why in the temple of the Oracle of

Delphi, the center of the world in Olympian religion, there was a rock sculpture named omphalos. Christians think Jerusalem is the center of the world, so there is also a sculpture known as omphalos in the Church of the Holy Sepulchre. I mean the original Church of the Holy Sepulchre in Jerusalem, not the one in Cambridge, United Kingdom.

Hormones are chemical messenger molecules produced by the human body so different organs perform their function correctly. Many endocrine glands produce them. When most people think of endocrine glands, they picture the pituitary, the hypothalamus, the pineal gland, the pancreas, the thyroid gland, the parathyroid glands, the thymus, the adrenal glands, and the gonads. However, you may be surprised to know that the heart also has an endocrine function, as it secretes some natriuretic peptides.

The human body can be infected by numerous pathogens. They can be bacteria like *Campylobacter jejuni*, parabasalids like *Trichomonas vaginalis*, diplomonads like *Giardia duodenalis*, percolozoans like *Naegleria fowleri*, kinetoplastids like *Leishmania donovani*, ciliates like *Balantidium coli*, apicomplexans like *Cryptosporidium parvum*, amoebae like *Acanthamoeba castellanii*, fungi like *Candida albicans*, animals like *Enterobius vermicularis*, and viruses like the Marburg virus (*Marburg marburgvirus*).

The immune system is specialized in protecting the body from threats such as pathogens or toxins. The most important cells of the immune system are the white blood cells. These cells can phagocytose intruders or destroy cells that are infected by intracellular pathogens. White blood cells can be lymphocytes, neutrophils, basophils, eosinophils, or monocytes. Monocytes become macrophages. Many immune system cells are found in the lymph nodes. T cells are lymphocytes. They mature in the thymus.

In 2006, Zafeiria was a volunteer at the Edinburgh Science Festival. She was motivated to join it because she liked reading popular science books, reading astrophysics blogs, reading the magazine "New Scientist," and attending conferences on scientific and technological topics. As a fan of science education, she also wanted to be engaged in it. In the Edinburgh Science Festival, she taught kids about the following human organ systems: digestive, respiratory, nervous, circulatory, muscular, and skeletal. She loved working with children. After that experience, she embellished her bedroom with diagrams of organ systems.

In his work titled "De Humani Corporis Fabrica Libri Septem," Renaissance physician Vesalius heavily criticized ancient physician Galen for studying the human body using model organisms (*Loxodonta africana*, *Canis familiaris*, *Ursus arctos*, *Equus caballus*, *Sus domesticus*, *Bos taurus*,

Ovis aries, *Capra hircus*, *Papio hamadryas*, & *Macaca sylvanus*). However, Galen started a tradition that has lasted to our own days, as model organisms can provide us with a lot of data. The creature most usually thought of as a model organism is the guinea pig (*Cavia porcellus*), an animal used in medical experiments. That is why people who are experimental subjects are sometimes metaphorically referred to as guinea pigs. As François Jacob (1987) tells us in his autobiography titled "La Statue Intérieure," biochemist Jacques Monod said, "what is true for the bacterium *Escherichia coli* is also true for the elephant." The elephant of this wisdom aphorism is not *Loxodonta africana*, the elephant studied by Galen. It is *Elephas maximus*, the elephants seen by microbiologist Albert Kluyver in Asia, as Monod based his saying on a saying by Kluyver that is reported by Kamp et al. (1959) in "Albert Jan Kluyver: his life and work." Whatever the species of elephant that we choose, it is still true that biochemistry and molecular biology are similar in both bacteria and elephants, and this is a general law regarding all cellular organisms.

All cellular organisms share similarities because all of us come from the same common ancestor. This means that we can understand the biochemistry and molecular biology of different creatures using model organisms. The following model organisms have been the most useful ones to understand human biochemistry and molecular biology: the bacterium *Escherichia coli*, the yeast *Saccharomyces cerevisiae*, the fish *Danio rerio*, the frog *Xenopus laevis*, the mouse *Mus musculus*, the nematode worm *Caenorhabditis elegans*, and the fly *Drosophila melanogaster*.

Not all human biochemistry and molecular biology is studied using model organisms—you can also work directly with human cells. Sometimes humans have also been experimental subjects. Sometimes experiments are performed with the informed consent of the human subjects, as when a man willfully drank a culture of bacteria that belonged to the species *Helicobacter pylori* to show that they can cause gastritis. Sometimes experiments are done without the informed consent of the human subjects. These experiments are performed by governments. What I am writing is not a conspiracy theory; these studies have truly existed. Examples of this are the human radiation experiments that happened during the 20th century at the time of the Cold War. The government of the United States of America exposed some American citizens to carcinogenic radioactive material to see what happened to them. If you do not believe me, please read the following report published by the American government: "American Nuclear Guinea Pigs: three decades of radiation experiments on U.S. citizens. Report prepared by the Subcommittee on Energy

Conservation and Power of the Committee on Energy and Commerce, U.S. House of Representatives" (1986).

All this sounds scary, but there are always people ready to do horrible things. It is like when, in 2005, Birgitta the First once told me: "I would be ready to kill in cold blood if I thought it was the right thing to do." I do not know if she was sincere or if she just wanted to scare me. She enjoyed terrifying me. She frequently said the following words after she frightened me: "Did it scare you? Everything scares you!"

There are many molecules that can be used to modify human physiology or to kill pathogens that attack the human body. Some of these drugs can be found in nature. For example, the liana *Chondrodendron tomentosum* produces a poison known as curare that was used by South American Indigenous Peoples to poison arrows. Physicians use this toxin as a muscle relaxant when performing surgical procedures.

Pharmaceutical drugs have been isolated from certain species of bacteria such as *Saccharopolyspora erythraea*, *Amycolatopsis orientalis*, and *Streptomyces griseus*.

As I stated in the example of the curare, drugs have also been obtained from plants. The following plant species have provided important medicines: *Salix alba*, *Cinchona pubescens*, and *Digitalis purpurea*.

Drugs have also been isolated from fungi such as *Penicillium rubens*, *Aspergillus terreus*, and *Tolypocladium inflatum*.

It might seem strange, but medically important drugs have also been isolated from animals like *Tectitethya crypta*, *Ecteinascidia turbinata*, and *Conus magus*.

Jurisprudence

Know thyself!

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 20. *HOMO NEANDERTHALENSIS*

Just after I finished my freshman year at the University of Edinburgh, during summer 2006, I was able to participate in my first Mexican political elections as I was older than 18. As a result of that, I voted for the first time in my life together with Emilio the Sage, who convinced me to vote. The best candidate in that election was Roberto Madrazo. Unfortunately, the guy who won the 2006 Mexican presidential elections was Felipe Calderón. He was always drunk...

I bade farewell to Emilio the Sage in the intersection between two avenues, Avenida Cuauhtémoc and Avenida Xola in Benito Juárez, Mexico City (19.395806856170623, -99.15560731743788). I never met with Emilio the Sage again in person, as we followed different paths in life. I said goodbye to the young man who changed me...

At the beginning of sophomore year, I was going to board the bus from George Square in the Central Campus of the University of Edinburgh to King's Buildings, the sciences campus in the south. Then I found a young woman who was my classmate, and we started to talk together (55.94446579018292, -3.1878902154233293). As we boarded the bus, we saw that our mysterious classmate who always covered her head with a hood approached us. She greeted the woman with whom I was talking. The hooded young maiden told me that her name was Asia. She was extremely talkative. She talked so much that I stopped talking with her friend to talk to her. I kept talking to her throughout the journey to King's Buildings. I thought she was very nice. She was a friendly person even though she always concealed her face with a hood. After this, I started to spend time with her...

One thing which had a significant influence on my life was the fact that Leonardo Soria attempted to herborize wildflowers in El Cielo, Tamaulipas, which led me to learn how to collect herborized specimens with Professor Jerzy Rzędowski on a one-on-one basis. In 2006, I endeavored to determine to the species level some of the plants collected by Tiina Särkinen in Chiquibul, Belize. I met Tiina earlier that year while she was studying a master's degree in biodiversity and taxonomy of plants at the University of Edinburgh. I met her at the Edinburgh University Expeditions Society. Due to this, I used to go many times a week during afternoons to the herbarium of the Royal Botanic Garden Edinburgh (55.96651475555556, -3.2058435694918512). There, Tiina Särkinen taught me individually to differentiate the families of the angiosperms and to determine their species.

***Homo neanderthalensis* King, 1864 (Primates: Hominidae)**

Illustration made by Yasamin Rahmani. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 862.**

Plant systematics started as part of medicine. Neanderthal culture (*Homo neanderthalensis*) used herbalism to heal illnesses. Since then, all cultures all over the world have used herbalism until modern times. To be able to distinguish one plant from another, it is useful to know the differences between similar species. Therefore, physicians devised guidelines to identify them. In Hellenistic Greece, Theophrastus, the scholarch of the Lyceum in Athens, initiated botany in the Western culture. Afterward, Pedanius Dioscorides made long lists of medicinal plants. Classical and Arabic medical treatises such as those written by Hippocrates, Galen, and Avicenna kept Western herbalism alive throughout many centuries. In the Middle Ages, St. Hildegard made a compendium of the medicinal herbs known in the north of Europe. The medical academies of Salerno in the Duchy of Benevento and of Montpellier in France, taught medical students the uses and correct determinations of medicinal plants.

As time went on, all universities and colleges that taught medicine included this subject. When European Catholics conquered Mesoamerica, they found botanical gardens with medicinal herbs such as the ones of Tezcutzingo and Oaxtepec in the Aztec Empire. Later that very same century, physician Francesco Bonafede opened the first European botanical garden, the Orto Botanico di Padova, in the Most Serene Republic of Venice. The aim of this institution was to train medical students in the science of herbalism. In the following years, botanical gardens were opened in plenty of European institutions of higher education. During the times of European colonialism, King Philip II of Spain sent physician Francisco Hernández de Toledo to his New World domains to study biodiversity, but also, most importantly, the medicine of the new lands conquered by the Spanish Empire. Natural history expeditions during times of European colonialism initiated this strategy as a search for new medicines and useful species. They continued during the following centuries.

Physician Rudolph Camerarius discovered the mechanism of the sexual reproduction of angiosperm plants using the following species as model organisms: *Mercurialis annua*, *Cannabis sativa*, *Morus nigra*, and *Spinacia oleracea*. Discovering the sexual reproduction of plants increased the scientific interest in plant sexual organs, the most important parts to classify and determine plant species. Physician Gaspard Bauhin decided to write the names of some plants using binomial names instead of long descriptions. This inspired Linnaeus to use this binomial system to name all plant species, as it would simplify botanical nomenclature. He named all the species known to European civilization at his time in “Systema Naturae” (1735) and in “Species Plantarum” (1753). In these books,

he used Aristotelian logic to create modern systematics.

Since the time of Linnaeus, the beginning of all studies of plant systematics has involved going out to the field with a botanical press. One needs to place the specimen within paper inside cardboard within the press. The specimen that is going to be herborized is dried. Afterward, it is determined using publications and then it is mounted to be kept inside an herbarium. Charles Darwin thought about evolutionary relationships between organisms as a tree. Expanding this theory, biologist Willi Hennig postulated methods to make objective evolutionary phylogenies. Afterward, thanks to technologies that allow us to sequence deoxyribonucleic acid (DNA) and sophisticated algorithms that produce cladograms out of several DNA sequences, we can know in a more precise way the evolutionary relationships between plants. Plant systematics is not only useful to find evolutionary relationships between plants—it also allows us to know more about their biodiversity and their ecology.

During my sophomore year at the University of Edinburgh, I lived in a dormitory that had plenty of bunks inside a hostel known as Smart City Hostel Edinburgh. In modern times, it is named a&o Hostel Edinburgh City (55.949257024708224, -3.185832732679631). There were in total 10 beds in my dormitory and an en suite bathroom. Zafeiria also ended up living inside a similar dormitory within the same hostel. Zafeiria and I thought that soon we would have many dormmates, so she decided to leave the hostel and to look for a private room in an apartment. That was good for me because in her new flat, which was in a place known as the Pubic Triangle, Zafeiria had a kitchen. That was handy for my chemistry experiments!

(This might sound strange, but there is indeed a place in Edinburgh that people know as the "Pubic (sic) Triangle").

During the entire academic year that I spent in my dormitory, I did not have a single dormmate. Hence, all 10 beds were mine. Every night I slept in a different bed until I slept in the 10 beds. After that, I kept sleeping in each bed each night in the same order...

Zafeiria always embellished her new apartment with four stems of *Dracaena sanderiana* that she placed inside a vase with water (H_2O). She claimed that the number of stems had to be exactly four so they would give good luck to her. I loved spending the afternoons and the nights in her bedroom with her.

In general, my life was not very happy, as I felt unloved because Birgitta the First made me fall in love with her to hurt me. Birgitta the First was indeed the source of my unhappiness. She looked for me with the only aim of emotionally hurting me, to have

fun looking at how I suffered for her. I wholeheartedly longed for the happy times when I first met her during freshman year... At that time, Birgitta the First was always hugging me and we spent all the time happily laughing and having fun together. I thought that if I would please her enough, she would return to how she was the year before. This was of course a false idea, because the first personality that Birgitta the First showed to me was only to attract a new victim, it was not her true personality. Birgitta the First had already told me that before meeting me, plenty of boys fell in love with her and all of them ended up being heartbroken. Thus, her behavior was already serial.

The worst thing about her was that she felt proud of that. Birgitta the First genuinely liked to make me feel worthless. By doing so, she felt that she was powerful, and therefore that she was a high-value person. She felt that she had the power to subdue men. In fact, what Birgitta the First did was not anything special that would require an outstanding skill. She simply needed to make a guy fall in love with her, as any woman does when she wants a new lover, but instead of developing a healthy romantic relationship, she humiliated him whenever she was sure he respected her and was in love with her. She in fact spent a lot of time ruining my life and thinking about how to emotionally harm me.

Sometimes she sent her best friend Katarzyna to mock or bully me. However, Zafeiria always protected me from her by rebuking her and verbally abusing her every time she wanted to emotionally hurt me. Zafeiria was not able to protect me from Birgitta the First because, as I loved Birgitta the First, I willfully allowed her to humiliate me and abuse me. I loved her, but I did not love how she mistreated me. I wanted everything to be like when we first met. That is why my greatest desire was to please her—so she would be happy with me again. At the time, plenty of my classmates thought that Birgitta the First was my significant other because of the way we behaved toward each other when we were in lectures. In fact, at the beginning, they thought we were a cute couple. Nevertheless, Birgitta the First was not my lover and she was never my lover. The fact that other persons thought that we were lovers only attests to the sort of behavior that she performed to attract me.

Birgitta the First made me feel so stressed and depressed that I told Professor Wilson, my student adviser, that I wanted to stop being a student at the University of Edinburgh to become a student at another university. Nonetheless, he always told me that I should resist, that my problem was not important enough to quit the University of Edinburgh.

During the time that Birgitta the First psychologically abused me, I idealized

Natalie a lot. Natalie was my former girlfriend. Since she was my girlfriend, I always remembered her tenderly, especially in the evenings before going to sleep. I remembered her as a girl that was so cute and guileless. Thinking about her always helped me to relax and to have a good sleep. I lost Natalie's telephone number on Friday the 8th of September 2006 when my mobile telephone was stolen by a pickpocket in the Benito Juárez International Airport of Mexico City. However, one day I truly wanted to be happy and stop suffering for the sinister Birgitta the First. Hence, I wanted to find Natalie again to fully love her and, in that way, stop feeling any love for Birgitta the First.

Unfortunately, I did not know how or in what way I could find Natalie. At that time, my teacher Jana the Refulgent was very important. She helped me to avoid feeling so miserable. During nights, I frequently dreamed about how I had sex with her. All my sex dreams were about her. When I was in Cambridge Arts & Sciences, one of my schoolmates was a Russian girl that called me by telephone on some nights to have fun by practicing phone sex with me. That is how I learned that sexual game.

During the time of Birgitta the First, I started to have phone sex sessions with Jana the Refulgent. She feigned all the sex acts by telephone while we were nude, masturbating ourselves. Jana the Refulgent was not close to me in person, but even if she was far away, our minds were close to each other. Having sex with my real classmates would have been easier and more pleasurable than playing phone sex, but what was more important for me in such phone sex sessions was not sexual pleasure by itself. I wanted to share a moment with Jana the Refulgent, not with another woman. That is because Jana the Refulgent was an important person for me. Before, when I lived in Cambridge, she was quite close to me because she was in London, and I could meet her frequently in person. In 2006, I still went to visit her in London but not as frequently as before. It is very strange how in autumn 2006, my romantic feelings and my sexuality were split. I felt romantic feelings for Natalie, but I had sexual feelings for Jana the Refulgent.

My life changed after catching the tiny lepidopteran in Playa Miramar, Tampico, Tamaulipas, while Leonardo Soria was sea bathing. As I was learning to become a lepidopterist, I frequently went to meet Kevin Tuck, the curator of microlepidoptera at the Natural History Museum, London. In the collection of the museum, I photographed the type specimens of the Mexican species to be able to use them for my research. My photography camera was a Nikon Coolpix L3. Birgitta the First told me to buy it because she had one like that and according to her, it was wonderful. It was lovely going to the place where the collections of

lepidopterans were kept, the Wandsworth Store (51.448669090099806, -0.19684614981231477). It was an enormous storehouse full of gigantic taxidermy animals, including Aldabra giant tortoises (*Aldabrachelys gigantea*) and gharials (*Gavialis gangeticus*).

Kevin Tuck was very polite. His manners and his accent were like those of an English aristocrat from the Victorian era. His etiquette was so impeccable. Once it was 12:27 PM and he told me that he would meet me an hour later after I went to eat something. He arrived at 1:27 PM! He spent a lot of the time that I was there teaching me what he knew about lepidopterans... I also met a very good lady there who studied butterflies. Her name is Blanca Huertas. She taught me a lot of stuff as well.

Insect systematics started when Jan Swammerdam (1669) wrote his book "Historia Insectorum Generalis." Some years later, Maria Sybilla Merian studied insect classification, especially the order Lepidoptera. As she was a virtuosa artist, she illustrated them exquisitely. Afterward, John Ray wrote his work that set the basis for modern insect taxonomy. This book is titled "Historia Insectorum" (1710). Linnaeus included insects in his taxonomic revision of all the organisms that were known at the time he lived, the "Systema Naturae" (1735). Johann Christian Fabricius continued the work that Linnaeus started, describing the largest possible number of insects that he could. Afterward, Pierre André Latreille attempted to make a natural classification of the arthropods. According to Aristotle in this treatise on the "Parts of Animals," a natural classification involves studying the largest possible number of characters to avoid it being artificial. Jean-Baptise Lamarck was the first full-time researcher of invertebrates. He split the insects from other groups of invertebrates with whom they were always lumped.

As with plant systematics, the theory of evolution by means of natural selection changed the way we understand the relationships of higher taxa. As a result of evolution, they were seen as phylogenetic relationships. As with plants, modern molecular systematics also revolutionized the classification of insects. Nevertheless, its impact was not as radical as it was in the case of plants. Apparently, insect morphology is more informative regarding evolutionary relationships than plant morphology. Insect systematics is very useful because clade Insecta is the Linnaean class that has the largest number of species of terrestrial animals. Moreover, the fact that insects are so important in agricultural matters makes insect systematics a prominent discipline in pest control. It is also relevant in human medicine, forensic sciences, and veterinary medicine. As with plant systematics, it is also used in ecological studies.

During sophomore year at university, I had a friend named Felicity Muth. As I was, she was very interested in entomology. Furthermore, she was also a birder that had her own life list. We talked a lot about birds and insects. Felicity was a young woman that followed the fashion of showing off her bare belly and innie navel all the time, even outdoors during wintertime when it was cold. As she was thin, and her abs were toned, she looked very sexy. Years later, she became a professional entomologist studying the behavior and ecology of hymenopterans at the University of Texas at Austin. Later, she worked at the University of California, Davis. She is currently a principal investigator. Therefore, she has reached the highest level a researcher can attain.

Another one of my friends was Toby Nowlan, who was also a birdwatcher. Nowlan was an explorer because he worked in ecology projects in faraway places, the most exotic regions of the world. His life was full of adventures. He admired David Attenborough, so after graduation he wanted to work making wildlife television documentaries. He eventually fulfilled his dream by working in the British Broadcasting Corporation (BBC) and in Netflix. Nowlan is as renowned as Felicity.

Sandra Stålhandske, my classmate, lived in the same apartment as my friend Asia, the young maiden who always wore a hood. I met her because of Asia. Sandra and a friend of hers named Rachel Huggins got money from the Royal Scottish Forestry Society to publish a bulletin. Several printed copies of each issue were placed in buildings in the university so students could pick up a free copy. I frequently wrote articles for that student newsletter. That is how I became a published author. Sandra was an extremely beautiful and sexy young woman. Her face was sweet and adorable. She was taller than me. She was slim, blonde haired, and blue eyed. She had a flat, toned stomach and a very attractive innie belly button.

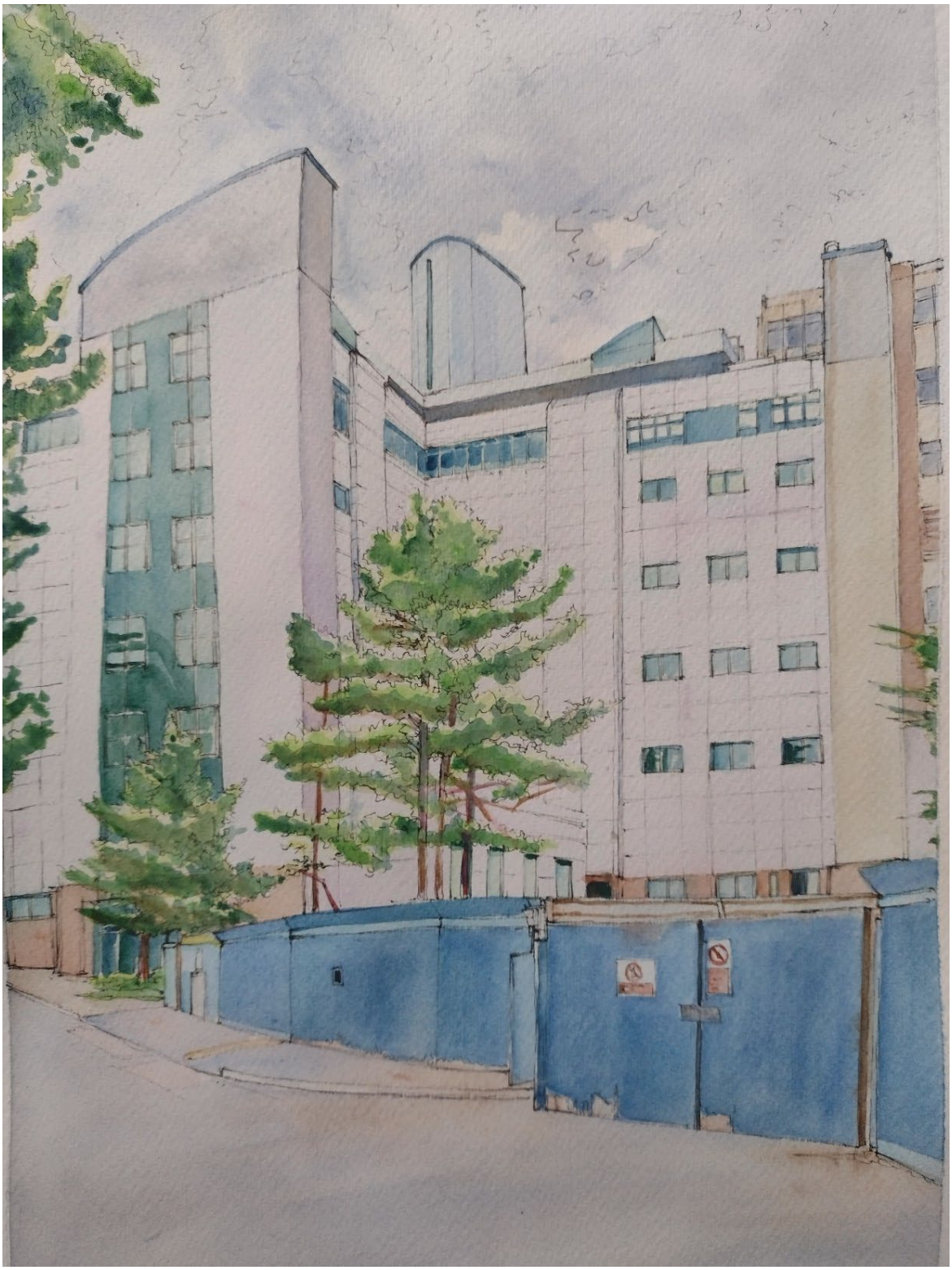
Zafeiria and Professor Colegrave hated each other. Zafeiria did not listen to him as the other students did. She pointed out the mistakes in his way of reasoning, and that was very daring! Professor Colegrave always replied to her, showing contempt for her. That is how Zafeiria started to criticize evolutionary biology. Zafeiria considered that a new evolutionary synthesis was required. I agreed with her. The problem is that many of the predictions made by behavioral ecology or evolutionary ecology—based on genes and their relationship with the success of species in the wilderness—have more exceptions than instances that follow them in the natural world. One of our criticisms was how economic theory influenced biological evolutionary theory. Human economy is, of course, a social construct, and multiple models of economy can be suggested. It is strange to suppose that biological evolution

would exactly match 20th-century American and European capitalist economies. However, scientists fitted their economic models to biology. Biodiversity is by far more complex than society. If the modern industrialist capitalist economy cannot explain all possible human societies, how can we believe it can explain the evolution of all biodiversity? Evolutionary models must be obtained by purely observing nature, not by devising them in such a way so they follow our favorite political social paradigms.

Zafeiria and I also criticized the fact that many evolutionary biologists infer that traits are genetically inherited even if they do not know the genomic sequences that code for such traits. That is careless science. They should first know the genomic level of organization before working on the behavioral or ecological one. It is true that the high heritability of a trait shows that a trait is being inherited, but that does not specify where on the genome such genes are located and whether their gene products are enzymes, ribonucleic acids (RNAs), regulatory sequences, or structural proteins. Maybe there are even no genes for such trait, and it is just epigenetic inheritance! Even the highly popular genome-wide association studies that do ensure that the trait is associated with a certain genotype, do not tend to identify the gene products involved. Knowing the gene products would be even more important than behavioral or ecological consequences, as such knowledge would have medical or agronomic applications. One would not only describe nature but learn how it works to master it!

During the Christmas holidays 2006, I went to Mexico. I went to watch birds from Real de Catorce, San Luis Potosí, to El Salado, San Luis Potosí, and to Mount Potosí, Nuevo León. The strangest event that I saw during these holidays was lightning that occurred while it was not raining. This happened in Real de Catorce. This was so-called dry lightning. When rain falls in a very hot and dry desert, most water evaporates before falling, but the lightning still strikes. That was the phenomenon that I saw. On Christmas Day 2006, my mother gave me a lot of money so I could purchase new binoculars. I bought the binoculars Swarovski EL 8x32 because the image quality was superb, and they allow one to see things as if there was more sunshine even if everything is getting darker. My old binoculars, the Samsung 7-15x35N, were kept by me as a relic, as they had the blessing of Emilio the Sage.

I decided to look for Natalie. I would find her to substitute the love I felt for Birgitta the First for a love for Natalie. If I did not love Birgitta the First, I would not feel as hurt by the way she bullied me. One could think that alternatively I could find a new random lover. This would not be an easy solution. It is true that I could have sex several times a week in a monogamous way



Michael Swann Building, Edinburgh, Scotland, United Kingdom

Illustration made by Hugo Arboleya. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 863.**

and that I could also spend a lot of time going out with her, but that would not guarantee that I would fall in love with that woman. Love happens; one cannot romantically love someone at will. Indeed, love is not the same as sexual attraction. So even if I would be having monogamous sex with a young woman and going out with her, I still could be equally in love with Birgitta the First as before, so she could still harm me. So, the random lover solution seemed a bit useless. On the other side, Natalie would be a 100% successful solution, as I still was in love with her. I knew I would be deeply in love with her if I met her again.

Yamir went on a student exchange program to Paris, France. Thus, I went to visit him. During the years I did not see him, he got a tattoo of a Western dragon. This was a little dragon. It was not huge like Alexandra's tattoo. When we were in middle school, Yamir used to criticize the school administrators all the time. Now he said that he had fond memories of the school, and that it was like one big family. Now he even justified the behavior of villains such as Iván and Crevenna. I hated all he was saying. I thought he was a hypocrite because he ended up loving the persons that he claimed to have despised. He said he changed his point of view because he matured.

I guess that was the so-called "maturity" that diabolical Adriana wanted me to undergo every time that she told me that I ought to "mature." The good part of our meeting was that Yamir, and I visited the Muséum National d'Histoire Naturelle, the natural history museum. Its evolution gallery is magnificent, and its skeleton collection is gorgeous. That skeleton collection influenced me to design the art that depicts the non-human mammals of this book that you are now reading and that were painted by Javier Montesinos Medrano. The most impressive exhibits in the museum were the fossil skeleton of *Thalassocnus natans*, the taxidermy mount of the Schomburgk's deer (*Rucervus schomburgki*), the skeleton of the elephant bird (*Aepyornis maximus*), and the corpse of the giant squid (*Architeuthis dux*). I also liked the marble sculpture known as "Orang-outang étranglant un sauvage de Bornéo" by Emmanuel Frémiet (1895) and the ancient Egyptian non-human animal mummies that Cuvier used to argue that evolution does not exist, because those species did not change since ancient times. Cuvier (1826) wrote this in his book titled "Discours sur les Révolutions de la Surface du Globe: et sur les changemens qu'elles ont produits dans le régne animal." Yamir confessed to me that he did not like Paris. The reason is that the city was not as he imagined it would be. He thought he would find the romantic city depicted in the film "Le Fabuleux Destin d'Amélie Poulain" (2001). Unlike Yamir, I did love Paris.

During early 2007, a new wildlife documentary was aired on television. Its

title was “Ocean’s Deadliest.” World-famous naturalist Steve Irwin was killed by a ray (*Taeniurops meyeni*) while filming this documentary. He was mortally wounded by a beast, as Adonis was slain by a wild boar (*Sus scrofa*) in ancient Greek mythology, or as St. Ignatius of Antioch was executed by a lion (*Panthera leo*) in the Roman Colosseum. Now that I have remembered Irwin’s death and the sculpture known as “Orang-outang étranglant un sauvage de Bornéo,” I think it is a pity that Irwin was killed by a ray that punctured his heart. I would rather he be strangled to death by an ape (*Pongo pygmaeus*). At least there would have been a struggle for survival before his doom. Indeed, there are always more glorious ways of dying. Prophet Homer wrote in the “Iliad” the following words said by Trojan Prince Hector: “My doom has come upon me; let me not then die ingloriously and without a struggle but let me first do some great thing that shall be told among men hereafter.”

I read an anthology of writings by Stephen Jay Gould. I found it amazing! Gould was not just a biologist; he was a first-class philosopher who always found connections between science and the humanities. He was the last of the great philosophers! As the philosophers of old, he knew about almost everything! Reading his anthology allowed me to know about plenty of topics that science students never learn at school. Even if by now it is dated, all young scientists should read his work to be educated in the humanities.

I decided to learn Latin, the language of ancient Rome. My grandfather Tomás frequently spoke sentences in Latin, especially Catholic prayers because he learned it when he was young. We should not forget that the Catholic Holy Mass stopped being said in Latin until the Second Vatican Council, when my grandfather was already an old man. My grandfather never stopped praying in Latin. I taught myself Latin by buying books on the topic. I became a good speaker, a mediocre reader, and a bad writer of Latin.

Back at university, Zafeiria was a lovely young woman. One day she gifted me some inflorescences that she bought in a flower shop. These inflorescences were very peculiar because they were very furry. They were young male inflorescences that just opened, but whose male flowers had not yet bloomed. They belonged to the species *Salix discolor*. Botanists refer to the inflorescences of this shrub as its catkins.

Birgitta the First was an idiosyncratic person. As a matter of fact, she spoke to few people. She claimed that most people seemed to her as non-human animals. The reason was that according to her, most people behave in irrational ways. They behave only following their animal instincts. She said that the behavior of most humans was inherited in the genes that code for the

most primitive neural circuits in the brain. She said that the behavior of these humans is not the result of education or lived experiences, but their behavior is merely the result of the evolutionary inheritance of instincts that already existed in the most primitive creatures and that can be found across all animal taxa. She believed that she was not like most people. She said that she was rational. According to her, all her behaviors were the result of learning and education.

She had a worldview that was an extreme version of both Descartes's ideas and E. O. Wilson's ideas. Descartes (1641) wrote a book titled "Meditationes de Prima Philosophia, in qua Dei existentia et animae immortalitas demonstratur." In this book he stated that humans are wholly rational, and that mind and body are totally different independent components of humans. E. O. Wilson (1975) wrote a book titled "Sociobiology: the new synthesis." In this book he stated that genes and human evolutionary history shape our cognitions, and behaviors. Both views seem incompatible. Yet, Birgitta the First somewhat mixed them together by saying that most humans are simply biological machines programmed to recombine and segregate their genes; whereas she had a rational spirit, not influenced at all by her biological body.

Birgitta the First said that she was a perfectionist. Therefore, she claimed that she always did everything better than other humans. She walked strutting with her back extremely straight, and with her head tilted backwards in a way that made her look aloof and arrogant. Her steps were like the runway walk performed by professional high-fashion models. The body language of her eyes when she looked at other people was contemptuous. She said that she did not understand why the other students did not reply as much as her to the questions that the lecturers asked. They did speak when the lecturers asked something, just not as much as her. Very frequently, what she said to the lecturers was false. She said that was unimportant.

What she deemed important was that the other students listened to her speaking. She claimed that it did not matter if she answered with stupid statements, as according to her, we were so idiotic that we would not notice that what she was saying was wrong. She claimed we were so moronic that by just listening to her answering all questions during lectures, we would think she was intellectually gifted. We did not think that. After the lecturers corrected what she said, all of us knew she did not answer correctly.

Birgitta the First always wore coats that were green. She always read the magazines "New Scientist" and "Scientific American." Her bedroom in Pollock Halls of Residence was embellished with a poster of the periodic table of elements. When I was with her in

her bedroom, she always listened to classical music or opera that she played on her computer. (If you want to hear the music that she liked, please listen to "Messiah (Händel-Werke-Verzeichnis 56)" by Handel (1741).)

At that time, I suffered from a great depression because of Birgitta the First. Once, I told Jana the Refulgent that I felt very bad. She purchased a round-trip flight ticket from London to Edinburgh to visit me and to ensure that I was okay. She sweetly comforted me and promised me that everything would be fine. She also gave me advice so I would feel better. During her trip to Edinburgh, Jana the Refulgent and I hiked up Arthur's Seat volcano and visited the Scottish National Gallery because she loved art. My favorite paintings from that museum are "Venere Anadiomene" by Titian and "l'Età dell'Oro" by Morandini. We ate in The Scottish Café & Restaurant. That day, Jana the Refulgent was excited because of eating haggis for the first time. I do not know why that was so thrilling to her. I was very used to haggis as I ate it at least once a week. Haggis is made of nutmeg (*Myristica fragrans*), black pepper (*Piper nigrum*), oats (*Avena sativa*), coriander (*Coriandrum sativum*), and guts of sheep (*Ovis aries*).

Jana the Refulgent said that Edinburgh city center reminded her of Prague because it was split into an Old Town and a New Town. What Jana the Refulgent said was peculiar because Braun and Hogenberg (1540), in their map "Edenburgum Scotiae Metropolis," also compared Edinburgh with Prague. The most stunning part of that visit of Jana the Refulgent was that during all the time that we spent together, her jacket had all its buttons undone while only wearing a black bra under it. Therefore, I was able to see during all that time the bare skin of her chest, her belly, and her navel. As a result of seeing so much beauty, my penis had erections during almost all the time that I was with her.

Jana the Refulgent had already finished her bachelor's degree in law and now she was studying for her master's degree in politics and government in the European Union, at the London School of Economics and Political Science.

In the first half of 2007, smartphones became extremely popular. These telephones were able to do many different tasks. It was the same as having a highly sophisticated computer in one's pocket. I was already familiar with these types of technologies for many years already, because in Pokémon Generation II there was a science fiction object known as Pokégear that was essentially a smartphone. The only difference is that the Pokégear of my teens was fictitious, and the smartphone of my adulthood existed in real life.

Smartphones allowed for social networking services such as MySpace, Facebook,

Twitter, and YouTube to become extremely popular. Thanks to the new telephones, people could be in contact with their friends everywhere and at any time of the day. That is because telephones are not as large as computers, and they can go wherever one goes inside our bag or pocket. Since then, society has changed radically. People became obsessed with their telephones. That led to a loss of personal interactions in the real world. An obsession with popularity and social approval led people to lose reasoning abilities and to become highly dependent on public opinion and on the opinions of influencers. The new generations of young people, the so-called digital natives, lost social skills that were common in previous generations. Immoral behaviors such as ghosting also became ubiquitous.

For governments, this was highly beneficial because now they had a consummate tool of massive social control to create the dystopic "perfect citizen." Soon all the ideology of people was unified in accordance with the political theory trends that were better financed to be marketed in social media. They were financed by non-governmental organizations, corporations, multimillionaire entrepreneurs, political parties, and governments. Social media became a mass surveillance tool that was used by governments to know the private life of the citizens and by corporations to know their customers. The right to privacy was lost...

I decided to avoid joining any social media platform because I did not want to have another cybergirlfriend such as Julia. After all, plenty of social media platforms were very similar to ICQ. We should not forget that three years before, I renounced ICQ and any similar services. The only social media platform that I visited was YouTube because my friend Asia, the young woman that was always hooded, always sent YouTube videos to me so I could watch them. I knew that YouTube existed thanks to her. Nevertheless, I never uploaded videos to YouTube. I never wrote any opinions in the comments section below the video screen. Neither did I interact in any way with other users. On YouTube, I especially liked music videos because they allowed me to listen to music while I was studying, revising, or doing homework essays. (If you want to watch a music video that I liked please watch "Avril Lavigne - The Best Damn Thing (Official Video)" (2008).) Of all the social media platforms, the one that had the best branding was Twitter, because its logo was a bluebird (*Sialia currucoides*). In modern times it is named X, and it does not have a bird anymore.

Now that I am talking about birds, it is noteworthy to state that social media changed birdwatching. Before social media, the birders who used eBird watched birds for the transcendentalist satisfaction of being in close contact with nature or

thought that their efforts helped environmental conservation. After social media, people stopped watching birds for their own satisfaction and started to watch birds to satisfy other social media users so they could get their approval. This was done by uploading photographs of themselves birding or images of the non-human animals that they photographed. As a result of this, birdwatching became a highly competitive activity as everyone wanted to show to the world that their birding experiences were superior to those of other birdwatchers.

I liked a lot my friend Asia, the maiden in the hood. She was an extremely beautiful young woman. The beauty of her face was sublime, especially when a topic that she was discussing excited her. She was part of the massive influx of Polish migrants that arrived at the United Kingdom to get a British higher education after Poland became a member state of the European Union. Asia's gorgeous hair was long. She always wore hoodies and coats with a hood. Thus, her head was always hooded with her hair coming out from the front of her hood. That made her look mysterious because the hood concealed her eyes. When she walked in the streets, she even wore two hoods at once, the hoodie's hood and, covering it, the coat's hood. Asia loved her hoods so much that when she wore her lab coat, she wore under it her hoodie and even if she was in the laboratory class, she covered her head with the hood.

Asia was somewhat a mystic. We often spoke about the "Bible" and about God YHWH (Allah). We did not just talk about the ethical teachings of the "Bible" or about the institutional churches. As when I talked to Enrique Bouchot in Mexico, these conversations were full of mysteries. That was because even if at first sight Asia was an average religious fanatic, she practiced plenty of rare meditation techniques that allowed her to have visions of dead Catholic saints and of angels of God YHWH without needing to take any drugs. Moreover, Asia claimed that sometimes she was possessed by the Holy Spirit and during such times she could deliver prophecies. Asia was, for me, a heavenly spiritual refuge against the unrighteousness of Birgitta the First.

As I was never baptized when I was a child—because Ernesto Alvarado, my father, preferred to go to see his paramour Nora instead of taking me to church to be baptized—Asia decided to baptize me. She baptized me on Friday the 18th of May 2007. No church or institutional religious organization registered by any government was involved. There were no bureaucratic documents or any documents whatsoever. There was no party. There were no christening godparents, and no one was invited to my baptism. Nonetheless, there was something far better than all of that. There was a miracle. Only Asia and I were in the park known as George Square Gardens (55.94385326175958,

-3.188375822152745). The day was overcast, but it was not raining. Asia told me to put my hands in the same position that Muslims refer to as raising hands in dua. She said that was so I would receive baptism from Heaven. Immediately when Asia baptized me aloud, rain started to fall from the clouds. Asia baptized me in the name of God YHWH by using water that miraculously fell from the sky. It was a mystical experience that I shared with Asia. We got soaked in the rain. Our clothes were totally wet.

In the same way as when the blizzard was stopped at the summit of Mount Carn Ban Mor, the mystical experience did not happen inside our minds. It happened in real life. Most mystical experiences happen in the physical universe, not in dreams. It did not stop raining until I entered through the door of Smart City Hostel Edinburgh and Asia the theurgist kept walking toward her apartment. Asia did not charge me any money for the baptism. Furthermore, she gave me many baptism gifts—a scapular, a devotional medal, and Roman Catholic rosary beads as amulets.

Water has always been a symbol of ritual purification. In ancient Mesopotamia, priests attempted to exorcize demons and illnesses by throwing holy water at their patients while casting spells. Asia claimed that she also practiced exorcisms, but I do not know if she employed water for that. According to an ancient Egyptian myth, King Osiris, the Khenti-Amentiu, died by being torn apart by His morally chaotic brother, Seth. This myth was convenient for the Greeks during the time of the Ptolemaic dynasty when they ruled Egypt because it allowed them to syncretize ancient Egyptian religion with the newly introduced Greek Olympian religion. The reason is that the followers of prophet Orpheus claimed that the titans tore Bacchus apart because they were enemies of Bacchus's father, God Zeus. The Greeks used the Egyptian legend to preach that Osiris was in fact Bacchus. However, this was not the only version of this story, as other versions have been found.

In another version of this myth, as written on the Shabaka Stone, Seth drowned Osiris in the Nile River. Afterward He was mummified. Later He resurrected in all His glory due to His divine nature. This "bath" in the holy waters of the Nile that drowned Him allowed Him to attain His greatest divinity. Ancient Egyptian priests performed a ritual bath that meant becoming holy people before entering the temples of their Deities. This ritual purification was continued by the ancient Hebrews with the Tevilah ritual that was practiced in a mikveh, as can be read in "Leviticus" in the "Torah." The Mandaeans, the followers of the religion of St. John the Baptist, know this sacred bath as baptism and practice it in rivers many times a year as a usual sacrament. Christians,

following the example of Jesus, who was baptized by St. John the Baptist, are baptized during their conversion to purify themselves and to start a new life in Christ. For Christians, Jesus is the Christ. As it happened literally to Osiris, Christians metaphorically end their previous life with the baptism to be reborn to live a new life of ritual and moral purity. Some Christians still immerse their full bodies as the Jews and the Mandaeans do, but others only get their heads sprinkled with water in a symbolic way.

George Square Gardens, the park where Asia baptized me, is a holy place. Not far from the place where she baptized me, there is a sacred labyrinth. It was commissioned by Anglican priestess Di Williams who was the University of Edinburgh's chaplain. It was based on the Catholic labyrinth found inside Chartres Cathedral, Centre-Val de Loire, France. The labyrinth as a symbol is very old. In the Olympian religion the labyrinth was supposedly a place in Crete, Greece where it was said that the monstrous Minotaur sacrificed young people that were offered to him. He was finally murdered by Theseus. In medieval Catholicism, labyrinths were used to play an Easter ritual game where the dean of a cathedral threw a ball to all the priests that participated while he was walking toward the center of the labyrinth. In modern Christianity, labyrinths are symbols that mean a pilgrimage toward a holy place. Of course, they can mean life itself, as according to St. Augustine in "De Trinitate," life is a pilgrimage where the human soul returns to its divine origin. The union of our souls with the divine at the time we die, when our souls are separated from the earthly matter that makes up our bodies, is symbolically reaching the sanctuary at the end of the pilgrimage.

Until that time, all my mystical experiences had been spontaneous, and I was not able to control them. Nonetheless, Asia showed me that it was possible to trigger them at will. When Enríquez showed me how to meditate and how to deeply hypnotize myself, he taught me how to change my perception of reality. Yet, not so much as to trigger mystical experiences!

Asia suffered a difficult childhood full of violence. Her father frequently got drunk and physically punished her and her mother. As a result of that, she and her brother became faithful Catholics. She decided to study biology to emulate her mother, who also was a biologist. Asia believed that Hell, Purgatory, and angels truly exist. She did not think they were mere myths. She usually told a family anecdote that made her believe in that. Once, Asia's grandmother saw an apparition of Asia's great-grandfather after he died. He was a shivering ghost that asked Asia's grandmother to please pray to God YHWH to have mercy on him so he would be freed from Purgatory, where he was a prisoner due to the sins he committed while

he was alive. Asia considered that the Catholic Church indeed had divine powers. She claimed such grace came from the time when Jesus gave gnosis to his apostles. Nevertheless, she also considered that other Christians had the same divine graces as the Catholics, regardless of their denomination. For her, all denominations were equally valid paths toward her Deity. She was not intolerant to other Abrahamic religions either, as she thought that Judaism and Islam were as truthful as Christianity and that pious people can attain the same salvation and the same divine graces as Christians by being Jewish or Muslim.

St. Thomas Aquinas states in his "Summa Theologica," that religion should not only be understood through faith, intuition, and mysticism. It must be understood also by reasoning and theological discussions. Asia the mystic agreed with such belief. Therefore, she spent a lot of time talking to me about metaphysics and mysticism. We always talked a lot in a small park in King's Buildings (55.92217197974951, -3.173618509952813). Such conversations were delightful! Asia thought the worst modern ills were such ideologies that denied the supernatural, and she thought that defeating temptation involved not being seduced by such viewpoints. Asia claimed that she was able to see the angels that worked for the Devil. Each time she had evil thoughts or wanted to sin; she saw how an angel was attempting to persuade her to fall into iniquitousness. That is why she did not give into temptation. She knew that such evil thoughts were not produced in her mind. She could also see fallen angels tempting other people and how they influenced their thoughts.

Professor Norman Wilson, my student adviser, set some homework for me so I would do that during summer. He told me to read the whole "Biochemistry" textbook by Stryer et al. (sixth edition, 2006). He told me he would perform an oral exam to check that I learned after I returned to classes.

During the time that I was involved in Asia's mysteries, following her prophecies, I spent a whole night vigil meditating alone on top of Arthur's Seat volcano until sunrise. It was a mind-blowing, otherworldly experience. During the whole night, I was awake in a state of mindfulness meditation. During all the night, I watched how the clouds moved swiftly due to the strong air currents in the lower atmosphere below a sky full of stars. And I was alone in the middle of the darkness above Edinburgh...

The days after my night vigil on top of Arthur's Seat, I was on holidays in the Canary Islands, Spain. During those holidays, I experienced all the side effects of the night vigil. I felt as if I were a different person. I felt as if I were a living saint. My mind was all the time perceiving reality differently. I felt that my sense of self fused with all the Universe that surrounded me, as

if my skin was not the boundary of myself and my being would continue throughout an infinite immensity of space, reaching all reality; as if all reality and I would not be something different. That was thanks to all the ascetic techniques that Asia taught me.

The feeling that there is no boundary between oneself, and the rest of the Universe is important to do magic and to perform miracles, as it is only when one perceives reality in this way that the immediate part of the Universe surrounding us obeys us as if it were part of our body. It is not enough to just have a brief feeling while meditating—one needs to learn to spend most of the day feeling like this, so our body gets used to sacredness. This is not easy, because it means not perceiving reality as we are usually adapted to or as society teaches us that we need to perceive it. Yet, the effort is worth it.

Asia's religious practices and mystical rituals were not among such behaviors and matters that Jana the Refulgent thought of as important or useful in life. I knew that, and by being aware of that, I was not totally involved in Asia's religion. This allowed me to experience all the altered states of consciousness in a skeptical way without believing everything that she said.

In fact, Asia was sometimes fallacious. She frequently made a lot of hasty generalizations, such as believing that since mystical experiences exist and there are miracles, thus the whole "Bible" is literally true, and the theory of evolution by means of natural selection is false. Thanks to the healthy skepticism that Jana the Refulgent instilled in me, I could spend time with Asia and experience all the sensory and cognitive pleasures of her mystical experiences without becoming a religious fanatic about all she said. Like Mariana, Asia also liked to perform lots of rituals all the time. Asia was by far more holy, but she was not as creative as Mariana and did not innovate as many rituals.

You can see Asia on **page 840.**

After my holidays in the Canary Islands, I went to the Alps. I was in a town named Aosta, Italy. At the summit of a nearby mountain named Pointe du Drinc, I watched a wild bearded vulture (*Gypaetus barbatus*) flying. I had never seen such a large flying creature, as its wingspan measured around 3 m! In the mountains, there were also plenty of wild Alpine chamois (*Rupicapra rupicapra*).

Jurisprudence

Emilio the Sage convinced me to vote. According to Jana the Refulgent, this was a remarkable teaching. The reason is that the civic value of voting in elections allows democracy to work as it should. This also avoids there being governments that would oppress their citizens. Jana the Refulgent

thought that the greatest social problems can only be solved if citizens are educated in an apolitical way. In this way, without being biased by ideology, they can choose suitable options when voting for politicians. An apolitical education would be teaching science but not political ideology to avoid using education as a tool to manipulate the voting intention of the citizens toward certain candidates. Only this applied form of liberty would allow democracy to solve the greatest problems of our civilization.

Jana the Refulgent considered that it is always useful to wear something that would attract the attention of other people in order to make friends or be noticeable. She applied this idea by wearing skimpy outfits that allowed her to show off the bare skin of her sexy legs, arms, tummy, and belly button. Everyone paid attention to her because there is no human being that does not find the body of a young and beautiful woman attractive. Even women find such a body delightful. Due to this teaching of Jana the Refulgent, it was good that Asia the Mystic always covered her head with hoods. No other female biology student wore this fashion trend. It was the individual, personalized fashion of Asia the Mystic. It allowed her to look different, interesting, and charismatic.

Asia the Mystic thought that herbalism was evidence that what prophetess Vegoia said during Etruscan times was right. Vegoia thought that all the Universe was created by the Deities as a gift for humans. That is why all nature reveals truths to humanity regarding human destinies. Asia the Mystic thought that God YHWH was considering benefiting humankind because of the fact that He created plants which can produce molecules that can interact with certain biochemical pathways in the human body.

It is not possible to know if what Asia the Mystic said is true or not, as it is impossible to carry out a controlled experiment to test this. However, it is indeed true that nature is full of mechanisms to improve human health, and that human ingenuity has allowed people to use whatever organisms exist in the biosphere for humanity's benefit. Maybe, if the Deity did not create plants thinking about human health, it is still good to tell everyone that the Deity indeed created plants with medical aims in mind. Such self-delusion would be useful to allow people to keep looking for new medicines. Sometimes it is good to create myths if they allow us to improve our civilization. Like philosopher William James said, one ought to be pragmatic. Indeed, sometimes pragmatism is more important than truth. You can read about this in the book by James (1907) titled "Pragmatism: a new name for some old ways of thinking."

By going to Zafeiria's apartment to make chemistry experiments, I was able to fulfill one of the most important commandments taught by Jana the Refulgent. She thought it is very important to know how nature

works regardless of whether such knowledge could be applied. She thought that learning about the Universe is something worthy, not mattering if that would produce money or not. So, no practical uses are needed as an excuse to learn something new. Not everyone thinks like this. Plenty of scientific researchers investigate to get a lot of money or prestige. My only aim in performing chemistry experiments in Zafeiria's kitchen was to understand nature and the Universe. I did that because of the love for wisdom that Jana the Refulgent instilled in me. The love for wisdom that Jana the Refulgent suggested allows us to explore even scientific fields that are not popular. These are scientific fields where almost no funding or honor is allocated. That is why I was able to study something as unpopular as the systematics of the microlepidoptera with Kevin Tuck.

The dry lightning of Real de Catorce was something surprising! Nevertheless, it was not something supernatural. It was a natural phenomenon. Even in nature, we can find fascinating daily life phenomena. What is important is to love the natural mechanisms behind how the Universe works as Jana the Refulgent preached. This allows us to find in any natural phenomenon or even in the industrial processes that are physical or chemical something that can amaze us and fuel our desire to know more. Our capacity to be amazed by physical, chemical, or biological phenomena is something that we ought to cultivate daily. This is true even with everyday wonders or with the simplest observations that we can make from the reality that we perceive. Only in this way can we transform our entire life into a scientific and philosophical adventure, as Jana the Refulgent wanted me to live. This philosophical and scientific adventure makes us live always motivated and in love with life. That is what she expected from me, and no less than that.

Asia the Mystic considered that all human destinies are already decided by the universal mind, a hypostasis of God YHWH. Under her paradigm, Steve Irwin's death was a divine decision. Nonetheless, I think that he also shared part of the responsibility for his own death because he decided to go scuba diving in a place full of dangerous creatures, such as the round ribbontail ray (*Taeniurops meyeni*) that killed him. As an answer to this, Asia the Mystic thought that our own decisions are a delusion because God YHWH is truly the One who decides what we are going to think or say. So, if Steve Irwin decided to live a life as risky as his life was, that happened because that was what the Deity wished, and Irwin just falsely imagined that he decided it. It is impossible to know if the Deity truly actively decides what happens in the Universe, or if He simply created universal laws and does not interfere in human lives. This was believed by deist scientists during the 18th century.

What is indeed true, and what Asia the Mystic is right about, is that plenty of times, what we consider as "our free will" is not truly our choice, but the way we are programmed. Society programs us. As sociologist Émile Durkheim (1893) noticed in "De la Division du Travail Social," most of the time we think like the social group that surrounds us. He named this effect mechanical solidarity. Not only does society manipulate our choices, but Sigmund Freud (1905) said in "Drei Abhandlungen zur Sexualtheorie" that our experiences in our first years of life also determine how we will be. We are also programmed by governments through formal education and propaganda. Indeed, we are simply puppets of our environment!

Moreover, our genotype also has a lot of influence on our personality and hence on our way of reacting to our environment. However, we always must have hope in reason, the basis of free will. We ought to hold on to our faith in reason, even if it might just be a myth, the myth of the rational human.

Birgitta the First loved everything that was labeled as rational during the Enlightenment due to the ideas of Descartes. That is why she claimed that she was the only biology student that was genuinely rational. In that way, she justified the discrimination that she displayed against all the other students, for she believed they followed animal instincts that evolved before the human species. According to Jana the Refulgent, this discrimination is absurd. She thought that we should not reject our most irrational parts such as our emotions, our intuition, our bodily desires, and our passions. In fact, Jana the Refulgent thought all such parts are essential to live a fulfilling intellectual and philosophical life. Jana the Refulgent accepted all the most irrational and primitive parts of her mind, which were the same human traits that many people (such as Birgitta the First) rejected. These traits, which are the result of biological evolution, make us human. We ought to celebrate them instead of suppressing them or rejecting them.

I was extremely sexually attracted to Jana the Refulgent when she wore her sexy outfits whenever she spent time with me. This always happened regardless of what we were doing. As she was always scantily clad, all the persons turned their heads in the street to look at her. Jana the Refulgent willfully dressed like that to sexually arouse passersby that would see her and to see the lascivious leers of the people that lustfully looked at her. Jana the Refulgent loved sexual arousal. She was one of the most sexual people that I have ever met. She was able to enjoy her sexuality and her alluring beauty as much as possible because she did not have any cultural inhibitions that would limit her behavior. She believed that sexuality is something totally natural in human beings, like eating, sleeping, or urinating. Thus, she

thought we should enjoy our sexuality shamelessly and in the most sex-positive way. It is something that must not be censored or horrify us. Jana the Refulgent believed that sex and bodily demonstrations of love are something good and lovely and that we should be proud of that part of us.

Asia the Mystic believed that modernity keeps us away from spirituality. She saw with suspicion such technologies that make use of the discoveries of the cognitive sciences to reprogram the human mind. She thought that these technologies were being used by a global political conspiracy to change the values of people. She claimed that she was even ready to undergo martyrdom and to be killed instead of changing her values. It is likely that such a conspiracy does not exist in real life. Nevertheless, what is true is that no one should control our mind and modify our values. The freedom of thought and discerning good from evil is part of the natural law that must have preference over every state law. As it was stated by John Stuart Mill (1859) in his essay "On Liberty," the human mind must enjoy liberty. That is why we must hold on to our values even if the people who want to modify them make use of propaganda through mass media to attempt to change them.

My night meditating on the summit of Mount Arthur's Seat can be seen as a metaphor for how humans hike up above all adversities until reaching the summit. That summit can be seen as a mystical union with divinity. I hiked up the volcano during nighttime without any flashlight, and even if darkness surrounded me, I reached the highest point where I had communion with all the stars of the cosmos. That is just as the doctrine of Jana the Refulgent, a set of techniques to learn to live wisely and face all adversities that, metaphorically, are like the darkness.

Following the path with faith in the teachings of Jana the Refulgent and with hard work and discipline allows us to finally reach the summit. Such a summit can be seen as the state of being in communion with wisdom. Such communion is an ecstasy that is comparable to having sex with Jana the Refulgent. In the case of my night vigil on top of Arthur's Seat, it was meditating at the highest point of Edinburgh gazing at the celestial stars. And not just gazing at them, but also feeling a kinship with them as being part of the same universal system, being a son of all of them, being a son of Heaven as much as a son of Earth.

CHAPTER 21. *AMICIA ZYGOMERIS*

During summer 2007, I looked for a plant named *Amicia zygomeris* for Tiina Särkinen. The aim was that she would make a phylogeny of the genus *Amicia* as part of her doctoral research. She was required to extract deoxyribonucleic acid (DNA) for her studies. Therefore, if the specimens were as fresh as possible, they would be more suited for her research work. Tiina Särkinen was able to collect South American plants but not the Mexican species, as she was doing her fieldwork in South America and not in Mexico. Hence, she asked me to please help her to collect the Mexican species. I went to faraway places in Mexico to look for it. I went to Zacapoaxtla, Puebla; Temascaltepec, State of Mexico; Yextla, Guerrero; El Triunfo, Chiapas; and Putla, Oaxaca.

To be able to transport the specimens with care, I did not travel by plane to reach the destinations. Thus, the journeys were long and tiring. To attempt to find the plant, I used the coordinates found on the website "Tropicos" of the Missouri Botanical Garden, United States of America. The most difficult expedition was the one to Putla. To reach Putla, I traveled from Oaxaca City through a long highway that was full of horizontal curves. In Putla, I went by car through a dirt road inside the forest. In the forest, I walked on foot with my father to look for the plant. There was a heavy rain, but we did not care about getting wet. At that time, I had absolute faith in my handheld GPS (global positioning system) unit, as I walked through the bushes where there was no trail to attempt to reach the coordinate. If the handheld GPS receiver stopped working, we would be lost, as everywhere I turned my head the forest looked the same. We moved through the thick herbs and bushes that seemed as if they were an endless maze. Sometimes we needed to struggle to move our limbs because there were numerous wild plants surrounding us. When we finally returned to the car, we found a group of illegal loggers that were holding firearms. They asked what we were doing there. We told them, and fortunately, our explanation seemed satisfactory to them, so they left.

Returning from Putla was no less difficult. That night, there was too much fog and torrential rainfall. The narrow highway had plenty of horizontal curves. I had to warn my father each time we were approaching a horizontal curve as visibility was too low. Finally, that night we got lost because we did not follow the highway that would allow us to return to Oaxaca City. Instead of that, we reached Tehuacán, Puebla. That was a lucky mistake because Tehuacán-Cuicatlán is a dry desert with no fog. It is

***Amicia zygomeris* De Candolle, 1825 (Fabales: Fabaceae)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 863.**

totally different to the mountains that surround the Oaxaca central valleys, where night could be extremely dangerous because of the weather.

Before writing about the work done by Tiina Särkinen, I need to explain a bit about biology so it can be understood. All cells and viruses have genomes. A genome is a set of genes where a cellular organism or virus stores heritable information. The genomes of viruses can be stored in DNA molecules or in ribonucleic acid (RNA) molecules. This depends on the species of virus. The genomes of cells are always stored in DNA. Genomes are made of subunits known as nucleotides. The sequences of these subunits can be known by humans using machines. We store these sequences as symbols, such as strings of letters, in databases. In us, creatures with nucleated cells (eukaryotes), there are usually wide spaces of DNA that do not code any proteins or RNA. Plants, like humans, are also eukaryotes. Plants have a genome inside their cells' nuclei, another genome inside mitochondria, and another genome inside plastids. Mitochondria are organelles that carry out aerobic respiration. Mitochondria are former endosymbiotic cells related to a bacterial genus belonging to the clade Pseudomonadota and known as *Iodidimonas*. Plastids are other organelles that are also former endosymbiotic cells. Most eukaryotic plastids, including plant plastids, are related to a bacterial genus belonging to clade Cyanobacteriota and known as *Gloeomargarita*. Plastids can have plenty of different functions and they have different names according to their functions. They can be proplastids, chloroplasts, chromoplasts, etioplasts, leucoplasts, amyloplasts, &c.

Tiina Särkinen compared several DNA sequences from the following species of plants: *Amicia medicaginea*, *Amicia fimbriata*, *Amicia micrantha*, *Amicia lobbiana*, *Amicia glandulosa*, *Amicia andicola*, and *Amicia zygomeris.* Only three of these sequences were densely sampled. They were intergenic spacers. Intergenic spacer means a genomic region of DNA between two genes that does not contain any genes. The first sequence was the internal transcribed spacer (ITS). The second sequence was the intergenic spacer between the plastid genes that code for tRNA-Gln and ribosomal protein S16 (trnQ-5'rps16). The third sequence was the intergenic spacer between the plastid genes that code for ribosomal protein L32 and tRNA-Leu (rpL32-trnL). "tRNA-Gln" stands for "glutamate transfer RNA." "Ribosomal protein S16" means the "ribosomal protein number 16 that is found in the small subunit." Its protein gene product is also known as bS16c. "Ribosomal protein L32" means the "ribosomal protein number 32 that is found in the large subunit." Its protein gene product is also known as bL32c. "tRNA-

Leu" stands for "leucine transfer RNA." Cells use ribosomes and transfer RNA (tRNA) to synthesize proteins.

After this etymological digression, I shall now continue discussing Tiina Särkinen's work. To amplify the three intergenic spacers, Tiina Särkinen used the polymerase chain reaction (PCR). This means using the Taq DNA polymerase that was originally obtained from the bacterium *Thermus aquaticus* to amplify such DNA sequences. The enzyme from that thermophile is used because it can resist the high temperature reached by the thermal cycler every time it breaks the hydrogen bonds between the two strands of the DNA molecules. The DNA strands are separated so the polymerase can catalyze the synthesis of new DNA molecules. After amplifying the desired DNA sequences, Tiina Särkinen sent them to be sequenced and compared them using software. The results of these studies are evolutionary trees of the DNA sequences that were studied. In this way one aims to infer the evolutionary relationships of the organisms that were studied. In the results it was obvious that *Amicia medicaginea*, *Amicia fimbriata*, and *Amicia micrantha* are close relatives that frequently have hybrid offspring. Such interspecific gene flow happens in the humid forests of the Bolivian Andes.

The same summer as my expedition with my father, my grandmother Lorenza died. I was not sad because her death was not painful. She died at a very old age after having enjoyed all the years of her long life. She died at her house in El Rosedal, Coyoacán on Saturday the 23rd of June 2007. No one knows how old she was when she died because she personally registered herself in the civil registration office when she was already an adult. She wrote down the birth year that she fancied because even she did not know when she was born. Following the laws of Emilio the Sage, I did not attend her funeral. Her body was cremated in a crematorium known as Izaz Cremaciones, Iztapalapa. Her ashes were kept in her house in El Rosedal, Coyoacán.

Before dying, my grandmother decided that she did not want to go upstairs anymore to sleep. She was able to walk, and she could go upstairs, but it is likely that she did not want to go upstairs anymore because she suffered from cataracts and did not want to accidentally trip while walking. My aunts asked her to please have a cataract surgery, but she was afraid of that medical operation, so she never agreed. As she decided to remain all the time on the ground floor, she slept in the same bedroom where her husband slept when I was a teenager.

It was the same bedroom where domestic workers Helena and Victoria slept before I was born. Helena and Victoria independently reported that the infamous female ghost La Llorona haunted that place during nights and early mornings. My grandfather Tomás said that in that very

same bedroom, he was scared by a tlahuelpuchi, a blood-sucking, flying woman. My grandmother Lorenza requested every night that my dog (*Canis familiaris*) named Pepa would sleep with her, because she claimed that during early mornings someone attempted to enter through the window. Lorenza could not see who the person was who wanted to break in through the window because her cataracts prevented her from seeing. Nevertheless, there was no way someone could access this window from the street as there was a fence and a garden between the window and the street. If it was true that someone was able to access the window from the street during early mornings, that person must have been ghostly and not a normal person.

A great blessing happened to me at that time. Birgitta the First, the sinister, went on a student exchange program abroad. I would at last live a year without suffering from abuse! Katarzyna, the best friend of Birgitta the First, always wanted to give me the email (electronic mail) address of Birgitta the First so I would keep in contact with her. Nonetheless, I did not accept the email address. I was fed up with that evil young woman and I just wanted to relax.

Even if Birgitta the First was not in Edinburgh during the academic year 2007–2008, I kept looking for my former girlfriend Natalie. I knew that the best thing for me would be to find her before Birgitta the First returned. In that way, I would be in love with another woman, and Birgitta the First would not be able to emotionally hurt me as much as she had done before. However, my search for Natalie was not producing any results. It seemed futile... Thanks to Asia the Mystic, I knew that there were several social media platforms where I could look for Natalie. Asia the Mystic and I had looked for her on Facebook, Twitter, and MySpace. However, we did not find any account that belonged to Natalie. As a matter of fact, I did not have any accounts on such social media platforms to avoid having a new cybergirlfriend such as Julia was formerly. Nevertheless, I was accessing such websites using the accounts of Asia the Mystic. My aim in finding Natalie was to have a real-life relationship with her, not to have a new Internet romantic relationship such as the one with Julia. Searching the full name of Natalie in Google did not produce any results either...

During junior year, we stopped taking lectures in the gigantic Swann Lecture Theatre. Instead, we took our lectures in smaller lecture halls also in King's Buildings. At that time, I lived in the same hostel as the previous academic year, the Smart City Hostel Edinburgh. However, this time, I had a lovely and spacious single bedroom with a single big bed, a desk, a large wardrobe, and an en suite bathroom. Frequently, a young Russian woman went to my bedroom to visit me. Her name was Angelina. She was also studying at the

University of Edinburgh. She also lived at Smart City Hostel, and I became a good friend of hers. I liked to go out with her to visit touristic attractions in the city.

During the academic year when Birgitta the First went on a student exchange program abroad, I met a young woman whose name was Frida Johnson. She arrived in Edinburgh from a foreign university as part of a student exchange program. She was heavily obsessed with environmentalism because she was a member of a political party. As she did not know about biology, I gave private tuition to her during afternoons and evenings. She needed such enrichment and remedial education because she was not able to understand the lectures. We became friends because we worked as a two-person team in the laboratory classes of a course known as molecular microbiology. At the beginning, we started to spend time together during afternoons and evenings because we were required to do our homework together, as we were a two-person team. Nonetheless, as time went on, we spent more evenings together than the compulsory homework evenings, and such meetings became private classes. My tuition was free of charge. However, it was useful for me to teach her, as I was also learning and revising while being her tutor.

I hated Frida's political ideology. At the beginning, I listened to everything she said, as I found such ideas interesting. Yet, after listening to the same speech every day throughout all the weeks, I ended up disliking it. Frida always said the same stuff. It seemed that her political speech was learned by heart. As all environmentalists, she had the herd mentality of the members of a cult of personality. Environmentalists love personality cults. In the 2000s, the godlike political activist that they lionized was Al Gore.

During the night of Thursday the 13th of December 2007, I was revising for my molecular microbiology exam with Frida and Saba. Our exam would be the next day. Saba was Zafeiria's best friend. She was American. Saba always said that I was in love with Zafeiria because I was talking about her all the time. To revise for our molecular microbiology exam, we were in a library that does not exist anymore because it was demolished. It was Darwin Library (55.921886890256296, -3.1713647384784553). We spent all day in the library from morning until midnight.

That day, after Saba and I refuted all Frida's environmentalist ideas, I stopped believing in environmentalism. Saba said that the only way in which the human species could respect and preserve nature would be to go extinct. This means disappearing forever from this Universe, as non-avian dinosaurs went extinct in the past. Then, and only then, did I agree with my teacher Jana the Refulgent regarding what she told me about agriculture in Costa Rica. Humans must have priority over other species, and we

must rule over them, as Jana the Refulgent thought. The ideas of Jana the Refulgent did not convince me of how futile environmentalism was. What convinced me of such a viewpoint was Frida, whose speeches preached environmentalism but were so annoying that they ended up leading to my rejection of such ideas. Before meeting Frida, I loved them deeply.

The main issue with environmentalism is that it is a hypocritic ideology. Modern human beings in developing or industrialized societies destroy the environment in an extremely devastating way. This is the price of living in the usual way we live with our current economy and technology. All environmentalists, as any other modern humans, are part of the problem, not a solution to it. The reason is that to be a member of this society, we are compulsorily helping to destroy planet Earth by being part of the current economic system, by what we eat, and by how we live our daily lives. Even the greatest hypocrisy of our times, that is known as sustainable development destroys our planet in a "sustainable" way. The reason why I claim it is hypocritical is the following one: A modern human living with sustainable technologies has a greater ecological footprint than a stone-age human that did not have any sense of environmental ethics and that was not interested at all in protecting nature. Instead of being hypocrites, modern humans ought to accept that we are necessarily destructive beings, a nefarious threat to the biosphere.

Since the 19th century when environmentalism was born, everything has gotten worse. Civilization has in fact attacked nature more viciously, but at the same time, we hypocritically claim that we love nature more and that we have a greater environmental consciousness. If environmentalism and green politics truly worked, anthropogenic environmental damage would have started to decrease since the reign of American president Theodore Roosevelt, more than 100 years ago... Nevertheless, even if environmentalism is so useless, it still exists because it is useful for very different ends. It helps some politicians to be empowered. These are bureaucrats that most of the time are not truly interested in the environment. Moreover, it is a multimillion-dollar ideological industry. My argument is not a perfectionistic fallacy, as environmental degradation since the beginning of the Industrial Revolution has been so accelerated that the effect of environmental laws and of the environmental sciences in stopping environmental degradation has been negligible.

A perfectionistic fallacy only occurs when what one is criticizing is at least minimally useful. The failure of environmentalism is not because not enough people have an environmental consciousness. It is neither due to corruption. Democracy and

capitalism INDEED change the world without needing to create a special sort of consciousness and even with our corrupt politics and economy. Environmentalism is simply not a suitable doctrine for our human species in its current industrialized or post-industrialized state. If it was suitable, it would have already massively converted people to have an environmental consciousness that would have, if not reversed, at least stopped the ongoing global environmental crisis. Its main achievement has only been transforming all members of society into proficient greenwashers. A solution to our current environmental problems is urgent, but that solution is not the sort of useless political campaign mentality known as environmentalism. The solution should not involve the futile idea of being "good" with nature. A new solution that entails a new ideology and a new way of applying science is needed.

Perhaps more science and less moralizing and partisan politics is needed. It is wrong to see our relationship with nature as good or bad. We need to stop seeing it from an almost religious, mystical perspective. We ought to see it as an engineering challenge. We should merely see our relationship with nature as efficient or inefficient to achieve humanity's goal of survival and prosperity. Nothing else than that. Regarding nature, we must be cold-hearted engineers, not emotional moralists. Only in that way can we behave according to scientific practices, and nothing else. Saying that something is good or bad is not a measurable continuity; ethics are too subjective. Environmental issues should rather be managed following an emotionally dispassionate range of efficiencies.

Not all issues are partisan within democracies. All politicians agree that if a citizen kills another citizen willfully and without governmental authorization, that is a punishable crime. These are not partisan issues. In the same non-partisan way, it should be agreed that environmental issues should be solved by following the best scientific evidence. Yet, that would be inconvenient for environmental activists, as they get rich by keeping environmental matters partisan.

After Frida Johnson left Edinburgh in mid-December 2007, I kept spending a lot of time with Saba, especially to study with her. I did not need to teach her anything, especially because she was very knowledgeable. Saba's pretty eyes were big. She was svelte. Her waist was slim. She had a flat, stunning stomach that she loved to show off, uncovered by any clothing thanks to her sexy outfits. She was very cheerful, so she was always smiling and was very funny.

At that time, I also used to spend time with one of my classmates. She was a blonde, blue-eyed young woman named Julja. I used to go out with her to chat at coffeehouses. She liked wearing longline T-shirts during

summer or longline jumpers during winter. She did not like to wear any clothes on the lower part of her body. She did not wear panties, skirts, shorts, or trousers while she was walking down the street or taking classes at university. Her longline T-shirt or jumper was the only piece of clothing concealing her otherwise bare vulva and buttocks. Nevertheless, they were not well concealed, as sometimes she flashed her vulva and buttocks in public. She did not attempt to hide them because she was proud of her sexuality and was very feminine. Julja had a slender body and the fact that she briefly showed off her sex organs in public made her attractive. While she was menstruating, she did wear panties.

The fashion trend of flashing the bare vulva in public was started by racy socialite Paris Hilton. Famous singer Britney Spears, her friend, learned it from her. Britney popularized such fashion in 2006 and 2007, as she flashed her vulva frequently in public because she was a sexy young woman. At its most glorious point, the Y2K fashion of the 2000s was so risqué that naughty ladies flashed their vulvas to their friends and to strangers alike in public. That was so erotic! If you want to see spicy Paris Hilton singing, please watch "Paris Hilton - Stars Are Blind (Official Music Video)" (2006).

Saldaña was impressed by my knowledge of systematics. Therefore, he asked me to write an essay for a literary magazine that he wanted to start. He never started such a magazine. However, I submitted the essay that Saldaña originally requested to a magazine known as "Elementos: Ciencia y Cultura." Elizabeth Castro Regla, the editor, illustrated my essay with a portrait of a chimpanzee (*Pan troglodytes*). It was made by Jacques de Sève (1766), and it is titled "Le Jocko." It was a taxidermy mount found in the natural history cabinet of King Louis XV of France. Elizabeth Castro Regla also illustrated the essay with a very weird drawing made by Thomas Landseer (1832) that depicts a Bornean orangutan (*Pongo pygmaeus*) riding a black wildebeest (*Connochaetes gnou*). Orangutans never do this... Since then, I kept writing texts in magazines and journals.

In December 2007, I read the book "Philosophia Botanica" by Linnaeus (1751). I did it on my own initiative; my professors did not ask me to do it. This book is incredible! It is amazing because it is as if one had gone to a lecture taught by the great Linnaeus! The text is written as if it were part of some lecture slides. It is not verbose. It is easy to understand and succinct. It is no wonder that it was written by the father of systematics, someone proficient in ordering stuff. Even if this book is extremely old, a lot of botany can still be learned with this text.

Danielle Potter, my classmate, always complained that she did not like that there was so much stuff to learn for our exams. She always said: "I hope scientists aren't discovering more things, so we don't have to

memorize so many things for exams." Before attending the University of Edinburgh, examinations were always a problem for me. They ruined formal education. Nonetheless, this stopped happening to me while I was studying for my bachelor's degree at university. Thanks to Jana the Refulgent, I stopped fearing them. They became something easy to solve thanks to her techniques. The effects of the teachings of Jana the Refulgent were reflected in my scientific learning. Now I could enjoy formal education more because exams stopped being bothersome. Furthermore, I could better understand the information that was taught during lectures due to my study tricks. Thus, I was able to obtain more knowledge per subject than what I would have acquired before becoming a disciple of Jana the Refulgent. Now I only had to experience the fascinating adventure that was being a science student without the obstruction of fear of exams or a lack of learning.

At my university, I studied several courses. They were about several fields of biology. The ones that I remember the most were the ones related to genetic engineering. I became the teacher's pet of Professor Fry, a plant scientist. He taught me biochemistry lectures that I found fascinating! Professor Fry gave me as gifts some living plants, including a planting tray with cruciferous plants that belonged to the famous species *Arabidopsis thaliana*. He also gave me a plastic planter with a cactus (*Schlumbergera bridgesii*). I took care of these plants in the bedroom where I lived in Smart City Hostel Edinburgh. Johann was an extremely good professor of organic chemistry. He thought I was great because according to him, I had more chemistry knowledge than the rest of my classmates. That was thanks to the excellent classes that Philip Thompson taught me during A-level. I loved the lectures of Professor Gallagher because he introduced me to the great diversity of microorganisms that I loved to look at under the microscope once my classmates left the laboratory after our lab classes finished.

This was like what happened when I lived in Mexico, when I looked at slide preparations under the microscope with Verónica Jiménez in Salvador's Science Workshop. One of the most surprising species of bacteria that I saw under the microscope at the University of Edinburgh was *Deinococcus radiodurans*, because it can survive being exposed to radioactivity, ultraviolet light, vacuum, low temperatures, dehydration, and low pH (potential of hydrogen). According to Zafeiria, they have an extraterrestrial origin. However, I did not believe her, as they fit well within the phylogenies of the other species that live on planet Earth. Professor McLeod introduced me to genetics, and thanks to his superb way of teaching, I was able to understand this complex subject. Professor French

introduced me to synthetic biology and to transgenic bacteria. He participated every year in the International Genetically Engineered Machine (iGEM) competition and always spoke about the benefits that DIY biology would give to humans in the future. His ideas were truly prophetical! Thanks to him, I was able to see some gorgeous and dainty cultured bacteria that shone with an exquisite blue light. They are known as *Photobacterium phosphoreum*.

Professor Reid was interested in how science can be applied to industry. I remember quite well how he introduced me to economic matters that are the basis of human social organization. Professor Davies was a refined English gentleman. His attire was stylish, and his accent was posh. His title was chair of experimental anatomy, but he was so utterly wise that he knew about almost all topics in medicine and biology. I loved asking questions to him because he always had an expert answer for everything. Moreover, he liked answering questions. Professor Davies is as knowledgeable as Robert Burton, the guy who wrote the encyclopedic book titled "The Anatomy of Melancholy" (1621). Professor Nimmo taught me how to work in a team, being the leader and organizing all the other members of the team. Professor Charlesworth taught me population genetics. Being taught by him was an honor as he is one of the most distinguished experts in his field all over the world. I also remember quite well Professor Milne, a botanist. I do not remember him as a professor who taught me awesome stuff. I remember him for all the jokes and stand-up comedy routines that he did during his lectures. He was extremely funny and all of us laughed out loud during his lectures.

One of the best experiences of my laboratory classes at university was when Professor Blaxter showed us an in vitro culture of nematode worms that belonged to the species *Wuchereria bancrofti*. It was exceedingly startling because when they are wild, they live inside the lymph vessels of the people that they infect with an illness known as lymphatic filariasis. The infected people suffer from deformities in such body parts where the worms dwell. I had a professor who was a plant scientist whose name was Gwyneth. I really liked her because she always wore outfits that allowed her to display the beauty of her hot body. She was a sexy lady. The skin of Gwyneth's tummy was alabastrine, as white as snow. I also had a professor whose name was Raphaela. She was very friendly, and I got on well with her.

If Zafeiria was not able to obtain the desired result in a laboratory class, she quickly exchanged her test tube or her Eppendorf tubes for those of another team at another table. In that way our practical work was always successful. To distract her victims from the other lab teams, she started to talk to them nicely and effusively. She distracted them to obtain the tubes in the same way as

illusionists use misdirection. When they were not paying attention to their tubes to pay attention to her, she swiftly exchanged the tubes! I have always been afraid of fire, so I did not like turning on the Bunsen burner using matches. Fortunately, beautiful Zafeiria always turned it on for me! She was my heroine!

My favorite laboratory class was when Professor Blakely gave us several different species of bacteria to culture them. After that, we had to determine them to the species level using the lab assays from "Bergey's Manual of Systematic Bacteriology."

At that time, I became so good at doing statistics that I taught individual enrichment and remedial classes to my classmates Davide Figini and Rose Palmer. They were like the lessons I taught to Frida Johnson, but in this case, they were just statistics classes. Both students ended up getting an A, the highest possible grade! This shows that by using the study methods of Jana the Refulgent, I was achieving something that previously seemed impossible. I was able to improve my math skills up to the point of getting top grades, and of being able to teach other people and allow them to be as excellent as me! To thank me for my help, Davide Figini gave me a seashell as a gift. It was a valve of a scallop known as *Argopecten irradians* that he collected in New York, United States of America. I got 78 points in statistics, when one only needed 70 to get an A. It was an exceptional achievement in mathematics that I would never have imagined before!

Ian Wilmut worked at the University of Edinburgh. He was famous for having cloned the sheep (*Ovis aries*) called Dolly (6LLS). This sheep was the first cloned mammal. In January 2008, I made an appointment to talk to him. I went to see him in person. Meeting such an eminent man was exhilarating! After telling me a lot about science, he told me that I should look for my happiness in life and nothing else. He told me how difficult the world of science is and how sometimes research work is stolen by other scientists. Ian Wilmut gave me as a gift an autographed book that he wrote, "The Second Creation" (2000).

In a biotechnology class taught by Professor Gallagher, there was a student contest to see who could give the best talk to all the class. We had to give the talk while displaying lecture slides on the screen. At the end, we were questioned by the lecturers. I won, so a bottle of red wine was awarded to me. Wine is a drink with ethanol (C_2H_6O) made of grapes (*Vitis vinifera*) and fermented with *Saccharomyces cerevisiae*. I did not drink the bottle—I gave it to Angelina—but it was a good accomplishment.

The kind of science that I studied at university was focused on molecular biology, cell biology, and microbiology. Now I will briefly outline how these

sciences appeared. The study of life at a microscopic level of organization began when Robert Hooke started to study organisms under his microscope. That is how he observed the empty cell walls that once had living cells inside of them, which belonged to a cork oak (*Quercus suber*). Since then, it is known that cells exist. Hooke showed that the tissues of multicellular organisms are composed of cells. After that, Leeuwenhoek discovered that there were also single-celled organisms such as *Euglena viridis* in Lake Berkelse Mere, South Holland, Netherlands. In the 18th century, botanist Jan Ingenhousz discovered photosynthesis using the following plant species as model organisms: *Nymphaea alba*, *Malus domestica*, *Juglans regia*, *Persicaria hydropiper*, *Solanum tuberosum*, *Veronica beccabunga*, *Salvia officinalis*, and *Lamium album*.

In what is now Germany, several researchers learned to isolate active pharmaceutical ingredients from medicinal plants. In that way, they started the modern pharmaceutical industry. The first active ingredient isolated was morphine ($C_{17}H_{19}NO_3$) from the opium poppy (*Papaver somniferum*). 19th-century biochemistry was able to discover the chemical formulae of several organic molecules. Biochemists also learned to synthesize them in vitro. This is important to industrially produce pharmaceuticals. The first synthetic drug was chloral hydrate ($C_2H_3Cl_3O_2$), a sedative. Anselme Payen and Jean-François Persoz discovered the amylases in malt from three different plant species: *Avena sativa*, *Hordeum vulgare*, and *Triticum aestivum*. This was the discovery of enzymes, the biochemical catalysts that allow metabolism to happen. Joseph Lister was later able to produce a pure culture of cells that belonged to the bacterial species *Lactococcus lactis*. This was the first pure cell culture.

Louis Pasteur discovered how to create vaccines from attenuated pathogens by successfully creating a vaccine against fowl cholera, a disease caused by the bacterium *Pasteurella multocida*. This started the modern vaccine industry. Robert Koch described postulates to find if a likely pathogen causes a disease by researching the cause of tuberculosis (TB) and finding it was caused by the bacterium *Mycobacterium tuberculosis*. Dimitri Ivanovsky filtered sap of tobacco plants (*Nicotiana tabacum*) that were infected by an unknown pathogen. Even if the filter would not allow bacteria to go through, other tobacco plants were infected by the filtrate. That is how the *Tobacco mosaic virus* was discovered. This was the first known virus. Camilo Golgi and Santiago Ramón y Cajal helped to unravel the inner structures of human cells. Gregor Mendel, working with peas (*Pisum sativum*), discovered that the genetic information of organisms was

found within factors that could be inherited and that followed segregation rules.

Afterward, it was discovered that in cellular organisms, this information was contained within DNA. This was achieved studying the bacterium *Streptococcus pneumoniae*. The crystallography studies of Rosalind Franklin allowed that the structure of DNA could be known. The DNA that Franklin studied was extracted from a calf (*Bos taurus*). Afterward, knowledge of cellular physiology allowed researchers, by manipulating the plasmids of the bacterium *Escherichia coli*, to create the first genetically modified organisms. This research also allowed that recombinant proteins could be produced. The first functional recombinant protein was mammalian somatostatin. Its host was the bacterium *Escherichia coli*. Frederick Sanger was a pioneer of protein and DNA sequencing. The first protein he sequenced was bovine (*Bos taurus*) insulin. The first DNA fragment he sequenced belonged to bacteriophage φX174 (*Escherichia virus ΦX174*).

Sanger's research was the beginning of genomics, proteomics, and systems biology. Veterinary advancements in non-human animal reproduction allowed the development of assisted reproduction for humans. In this way, people that otherwise would be infertile can conceive. In vitro fertilization in animals was successfully performed in rabbits (*Oryctolagus cuniculus*) before being performed in any other species. Research into the cell cycle has allowed us to better understand the different types of cancer. The cell cycle was first described in broad beans (*Vicia faba*), but later it was found that it was similar in other eukaryotes, even humans. Molecular biological sciences are auxiliary disciplines of medicine and agriculture that have changed society and planet Earth in significant ways. These technologies have of course led to social problems such as the bioterrorist attacks with the pathogenic bacterium *Salmonella enterica* that were carried out by members of the New Age cult of spiritual guru Osho. Nonetheless, their benefits have been by far more important than the issues they created.

Asia the Mystic claimed to have plenty of religious experiences. She prayed a lot for sinners. To do so, she attempted to imagine how it felt to have performed the given sin she was trying to expiate. She wanted to have all the cognitions of the sinners. This means having the thoughts and emotions that the sinner that she wanted to save would have after having sinned. She imagined she had sinned in that way, then felt all the remorse for that, and while having such remorse, she prayed. This sounds strange because Asia did not sin, she just imagined she sinned. Nevertheless, by feeling remorse for that, she thought that she was feeling the remorse of such sinners that do not feel any remorse, so in this way, the sinners would be forgiven thanks to her

prayers. Many of her friends and I asked Asia the Mystic how to solve our problems. She prescribed to us the kind of prayer or ritual that we had to perform, and such advice always worked. She claimed that when she replied to our questions, her answers did not come from her brain, that they were divine oracles sent by God YHWH (Allah).

Asia the Mystic was lazy. She almost never studied or revised what she learned at university. The reason was that according to her, an angel of God YHWH appeared to her and gave her a golden quill that she used in her exams. According to her, this supernatural object was invisible to the eyes of other humans, but it allowed her to answer questions correctly even about topics that she was not able to study or revise. These answers were always correct. Asia graduated with no problems, even if she did not study a lot, so her magic apparently indeed worked.

Asia wanted to know about her own religion. At that time, she had already read the whole "Bible," but she wanted to know more, so she decided to read "The City of God against the pagans" by St. Augustine, and the "Summa Theologica" by St. Thomas Aquinas. When she started to read them, she realized that she did not have enough background knowledge to understand them. Therefore, she prayed for enough knowledge to fathom them. Immediately after having finished her orison, she was able to read them and fully comprehend them. That was because she was divinely inspired. Asia the Mystic claimed that she was able to speak with the clouds and with the wind. That is why she could psychically control the weather. According to Asia the Mystic, she had so much wisdom and power because she invoked King Solomon to cast her spells. Plenty of the wishes of Asia the Mystic were fulfilled because prophet Solomon was the lord of the genies.

One day that I was walking at the junction of Infirmary Street and South Bridge, a young woman walking down the street called me by my name. That woman was Magdalena, the woman that always wore Gothic Lolita fashion, who always dressed in black, whose skin was milky, and whose blue eyes were gorgeous. She was the woman who was a descendant of aristocrats. I was already acquainted with her at that time. I was interested in flirting with her in 2004 to see if she could be my girlfriend, after having attempted to court Caroline and Melanie and before becoming Natalie's boyfriend. Like me, she also was a member of Mr. Owens's philosophy society. Magdalena was now studying for a bachelor's degree in business management at Queen Margaret University, a university that is in the city of Edinburgh. I immediately thought Magdalena could help me to find Natalie, as she was a good friend of hers three years before. She told me that

she indeed remembered Natalie quite well. She assured me that we both could find her together.

I started to spend time with Magdalena. We used to go to the cinema theater, to have dinner, to have a coffee, to museums, to art galleries, to classical music concerts, and to other places. Magdalena always told me: "If you come with me to the movies on Friday, I'll help you look for Natalie when we get to my apartment after the movie finishes." I always went out with her, but she never looked for Natalie... Like Jana the Refulgent, Magdalena always paid for all the food that I ate and all the drinks that I drank. Magdalena had so many photographs of herself. She loved to send me her photos by email so I would always think about her.

After some time, it seemed as if Magdalena and I were a couple of lovers. We were sexual friends, and we spent all the time together. Our dates were always in a coffeehouse named The Elephant House. Our first date was there. From there, we always went to her flat. Magdalena never wanted to help me find Natalie. It was only a trick to seduce me so I could become her sexual partner. Magdalena gave me as a gift a soft toy that looked like a chipmunk (*Tamias striatus*). To celebrate that it was thanks to Natalie that we started our romantic relationship, Magdalena christened the plush toy as Natalino. Even though Magdalena wore Gothic Lolita outfits, she did not listen to goth bands. She grew up surrounded by what poet Matthew Arnold (1869) referred to as the European high culture in his book titled "Culture and Anarchy: an essay in political and social criticism." Magdalena was taught to value classical music, ancient Graeco-Roman literature, and all such books referred to as the classics. If you want to listen to the type of music that Magdalena and I listened to in concerts, please listen to "Toccata und Fuge in d-Moll (Bach-Werke-Verzeichnis 565)" by Bach.

The most important place in Magdalena's bedroom was her wardrobe. It was always full of black gothic clothes. They were the latest fashion trends. Every three months, she donated all her clothes to charity and bought new outfits so she would always dress in the latest fashion style. All her outfits were expensive designer clothes. As Magdalena had a bathtub in her en suite bathroom, she liked to take bubble baths.

I decided to organize a day trip to King's Buildings to show my university campus to Magdalena. That day, I visited fascinating attractions in my own university that I did not even know existed before. We visited the futuristic nuclear magnetic resonance (NMR) spectrometer. This machine determines the chemical structure of the organic molecules that are introduced to it. The professor in charge of it turned it on to demonstrate for us how it worked with a compound that he had there. We also visited the electron microscope. The professor

there also turned it on so we could see how it worked using a sample of vegetable tissue from *Arabidopsis thaliana*. We also visited the natural history collection of the University of Edinburgh in Ashworth Building. It was full of taxidermy animals, animal specimens preserved in 70% ethanol jars, coral skeletons, vertebrate skeletons, and pinned arthropods. We saw all the collection, even the Aubrey Manning Gallery that is always closed to visitors. My favorite exhibits of this collection were the South American lungfish (*Lepidosiren paradoxa*), the olm (*Proteus anguinus*), the giant pangolin (*Smutsia gigantea*), and the Raggiana bird-of-paradise (*Paradisaea raggiana*).

At my university, most of my lectures and laboratory classes took place in King's Buildings. Others were in the Old Medical School (55.94533724128928, -3.1902729002780768). Birgitta the First claimed that the Old Medical School looked like Hogwarts from the Harry Potter franchise. What I found most impressive about the Old Medical School were the two Asian elephant skeletons (*Elephas maximus*). Once, I went with Magdalena to the Old Medical School to show her the Anatomical Museum. It includes skeletons of humans and other mammals. It also has preserved organs that once belonged to living persons to show human pathology or physiology. There are preserved human dissections as well. Magdalena told me that she thought it was a "human zoo."

My favorite exhibits of this museum are the marble sculptures of persons. I also loved the skull of the North Sulawesi babirusa (*Babyrousa celebensis*), the non-human primate skeletons, and the human skulls labeled for phrenological studies. Phrenology means knowing everything about a person's psychology by studying the skull of that individual. At the University of Edinburgh, no one believed in phrenology anymore. Not even Zafeiria, who believed in all sorts of strange stuff, believed in it! Yet, the exhibitions at the museum showed that it was very important in Victorian times. Phrenology was a pseudoscience.

To the west of the Old Medical School there are two peculiar sculptures. They are unicorns. They were made by Alexander Handyside Ritchie (1850). They are found at each side of Middle Meadow Walk (55.94526005785598, -3.1911740113784934). The unicorns look green because they are covered by microscopic chlorophyte algae and by *Klebsormidium* spp. The supporters of the old coat of arms of Scotland were unicorns. That is why they are there. The unicorn in the modern coat of arms of the United Kingdom comes from the old Scottish coat of arms.

Unicorns are symbols of light and divinity. They were very popular in the Indus Valley

Civilization. They might have been holy to them, but that happened a long time ago and all that has been forgotten. Modern Hindus do not worship them. I wish I could tell you the Harappan myths of the unicorn. I am unable to tell them to you because they have been forgotten. For example, archeologists found a Harappan seal that depicts a tree (*Ficus religiosa*) with unicorns. I do not know its meaning. Another seal has a three-headed creature. It has the head of a nilgai (*Boselaphus tragocamelus*), the head of an Indian cow (*Bos indicus*), and the head of a unicorn. In addition to these depictions, there are plenty of seals showing average unicorns. Contrary to popular opinion, the unicorn and the rhinoceros (*Rhinoceros unicornis*) were not the same animal, as in Harappan art they are depicted differently.

The ancient Greeks knew about the unicorn when Ctesias wrote a book about the marvels of India. His book was titled "Indica." Aristotle popularized the unicorn in his writings. The unicorns' holiness in Europe is due to a bestiary from the Roman Empire titled "Physiologus." In this text, the unicorn is compared to Jesus. This is because of a mistranslation of the biblical "Book of Psalms." Psalm 92 is known as "Mizmor Shir L'Yom HaShabbat." In Psalm 92: 10, the psalmist wrote: "You have exalted my horn like that of a wild ox; fine oils have been poured on me." In the Greek Septuagint, the 72 translators of the "Tanakh" thought that the aurochs (*Bos primigenius*) was a unicorn. The Christian naturalist that wrote the "Physiologus" read the Septuagint translation of the "Tanakh." He thought that Psalm 92 is allegorically about Jesus because it includes a reference to being anointed, and Christians believe that Jesus was the Messiah. Jesus was not yet born when Psalm 92 was written. However, Christians claim that the prophets prophesized the birth and life of Jesus. The idea that Jesus is the unicorn is linked to the secret symbolism of the metaphor of the virgin lady and the unicorn that you can also read in "Physiologus." In this story, the only way to attract and tame a unicorn is with the help of a virgin lady (**Page 19**). This lady is symbolically the Virgin St. Mary, who gave birth to Jesus. As Jesus was a mage, the unicorn was considered a magical animal during the Middle Ages. All this magic was practiced with the extremely long canine tooth of a narwhal (*Monodon monoceros*). Many people falsely believed these teeth were unicorn horns.

A similar modern belief is the idea that the horns of rhinoceroses are miraculous. Li Shizhen (1596) mistakenly wrote in his "Bencao Gangmu" that ill people can be healed with powdered horn of rhinoceros (*Rhinoceros unicornis*, *Rhinoceros sondaicus*, or *Dicerorhinus sumatrensis*). This pharmacopeia is very old, so some science behind it will of course be outdated.

Of all the buildings where I took lectures or laboratory classes, the one that I liked the

most was Ashworth Building in King's Buildings. I loved that building more than the others because it had many sculptures that depicted exotic organisms. These sculptures are titled "Ashworth Laboratories Reliefs," and they were made by Phyllis Bone (1929) (55.92395646547967, -3.172717458768864). I think this building was more majestic than the others because according to Asia the Mystic, an ideal building must not only be pragmatically useful, but it also needs to have plenty of architectural ornaments.

The beautifully sculpted organisms were the spear thistle (*Cirsium vulgare*), the red kangaroo (*Osphranter rufus*), the nine-banded armadillo (*Dasypus novemcinctus*), the Asian elephant (*Elephas maximus*), the aardvark (*Orycteropus afer*), the tiger (*Panthera tigris*), the lion (*Panthera leo*), the polar bear (*Ursus maritimus*), the Indian rhinoceros (*Rhinoceros unicornis*), the reindeer (*Rangifer tarandus*), the American bison (*Bison bison*), the chimpanzee (*Pan troglodytes*), the North American beaver (*Castor canadensis*), the tuatara (*Sphenodon punctatus*), the Aesculapian snake (*Zamenis longissimus*), the golden eagle (*Aquila chrysaetos*), the curled octopus (*Eledone cirrhosa*), the shore crab (*Carcinus maenas*), and the scarab that is holy to Sun God Ra (*Scarabaeus sacer*). I saw these awe-inspiring sculptures every morning when I walked from the city center to King's Buildings to take my lectures...

Inside Ashworth Building, there was a bronze sculpture titled "Affe mit Schädel" by Hugo Reinholds (1893). It depicted a chimpanzee (*Pan troglodytes*) sitting above many books that included the "Bible" and a book written by Charles Darwin. The chimpanzee is looking at a human skull. Now I will state my interpretation of this artwork. This is a novel interpretation, but according to postmodernist philosophy, not less valid than previous ones, as there are as many ways to understand a cultural text as there are readers. This sculpture is about human evolution and the change from religious metaphysics to secular science as the main epistemological source. From the point of view of the ancient art made under a metaphysical paradigm, the ape is meditating on its own mortality by staring at the skull. From the point of view of the scientific worldview, the ape is researching the evolution of primates by measuring the skull.

By depicting both worldviews in the same sculpture, this artwork shows us the substitution of metaphysics by science in part due to the discovery of evolution by means of natural selection. I believe that in the sculpture "Affe mit Schädel," the ape is an allegory of a human, but depicted as a chimp because Darwin has shown us our true primate nature. This sculpture reminds me of the astronomer monkey (*Macaca*

sylvanus) that allegorically depicts a human artist in the beautiful illustration titled "integra naturae speculum artisque imago." It is in the first volume of the work by Robert Fludd (1617) titled "Utriusque Cosmi Maioris Scilicet et Minoris Metaphysica, Physica atque Technica Historia." In this illustration, the macaque is surrounded by all the Universe. The centerpiece of this illustration is not the monkey, but the Holy Spirit under her Platonic title of the Anima Mundi. The Holy Spirit is depicted as a gorgeous lady.

Another work of art from King's Buildings that I loved was a mosaic mural that looked like Byzantine art but that was modern. It depicted the fauna of the Galápagos Islands. It was at the entrance of the enormous Swann Lecture Theatre in the Michael Swann Building. Its title is "Galápagos," and it was made by Elise Johnstone (1995) (55.92169379313651, -3.1717688050005406). The following beasts are depicted in the mural: the Galápagos porgy (*Calamus taurinus*), the marine iguana (*Amblyrhynchus cristatus*), the Galápagos land iguana (*Conolophus subcristatus*), the Galápagos tortoise (*Chelonoidis niger*), the flightless cormorant (*Nannopterum harrisi*), the small ground-finch (*Geospiza fuliginosa*), the sharp-beaked ground-finch (*Geospiza difficilis*), the medium ground-finch (*Geospiza fortis*), and the red rock crab (*Grapsus grapsus*). Asia the Mystic always meditated and prayed in front of this mosaic mural, as at that time there was no desk in front of the mural that would prevent art lovers from staring at its magnificence.

Something that I liked but that comprised several architectural works, not just one, was the panoramic view that could be seen from the windows of the molecular biology laboratories in Darwin Building and from the windows of the Upstairs Café at Michael Swann Building. The view included Edinburgh's Old Town, the Salisbury Crags, and the Arthur's Seat volcano that was inhabited by heavily flowered shrubs (*Ulex europaeus*). One could see all the highest buildings that were found at each side of the avenue known as the Royal Mile. The Royal Mile culminated on top of the Castle Rock volcano, where the imposing Edinburgh Castle could be seen. I think there was not anything more beautiful in Arthur's Seat than its microbial life. In one of our laboratory classes, Professor Deacon asked us for an environmental sample to culture it in an agar plate. My sample was soil from Arthur's Seat. What a dazzling result! The resulting microbial colonies were multicolored and multiform! It was like having a priceless work of art inside an agar plate!

In some lectures, our homework involved going to the Royal Botanic Garden Edinburgh (RBGE), to the Edinburgh Zoo, and to the National Museums Scotland. I really liked such trips outside of the

university. The glasshouses of the RBGE were extremely glamorous, full of bewitching, exotic species. Among the most fascinating species of RBGE were the tallest species of tree that exists (*Sequoia sempervirens*), giant waterlilies (*Victoria amazonica*), an orchid that provides its insect pollinators with a substance to attract females (*Coryanthes macrantha*), a huge carnivorous vine (*Nepenthes rafflesiana*), a plant that is a living ant nest (*Hydnophytum formicarum*), and an underground parasitic plant with no chlorophyll that produces eye-catching flowers (*Lathraea clandestina*).

I also loved the National Museums Scotland, where my favorite exhibits were the Celtic "Deskford carnyx," the sculpture of a woman known as the "Ballachulish Figure," the weapons found underwater known as the "Duddingston Loch Hoard," the "Millenium Clock Tower," the taxidermy mount of Ian Wilmut's Dolly (6LLS) the sheep (*Ovis aries*), the Guadalupe storm-petrel taxidermy (*Hydrobates macrodactylus*), the fossil *Slimonia acuminata*, and the insect collection.

On Sunday the 16th of March 2008, something unbelievable happened in Mexico City. Punks and goths joined forces to fight against a new subculture, the emo. All of them met to fight in Glorieta de los Insurgentes, Cuauhtémoc. That was because the old subcultures claimed that the emos were just copying them. And they were right because the emos lacked a culture, so they copied all the fashions and music styles of the other subcultures. However, I do not think that fighting was the right way to solve the conflict. If you want to listen to emo music, please watch "My Chemical Romance - Welcome to The Black Parade [Official Music Video] [HD]" (2006).

In England, having a regular university degree in law is not enough to work as a professional solicitor. In the 2000s, after having been awarded a law degree, all people who wanted to work as solicitors had to study the Legal Practice Course of the Law Society of England and Wales. After graduating from the London School of Economics and Political Science, Jana the Refulgent studied the Legal Practice Course in the London campus of the College of Law of England and Wales, an institution that nowadays is known as the University of Law. When Jana the Refulgent finally finished her last exam at the College of Law, she was happy about having finished all her studies. According to her, examinations were too stressful. I was bewildered by what she told me. She always got top grades, and her study methods were impeccable. With such assets, I would never have imagined that exams made Jana the Refulgent feel uncomfortable!

I told Jana the Refulgent that I talked about her teachings to plenty of people and that many of them wanted to meet her in person

in small groups to listen to her preaching. Jana the Refulgent told me that she would not teach any person other than me. She told me that her teachings were a personalized gift for me, for no one else. Our relationship as teacher and disciple was very secretive and private. The fact that such teachings were just for me made her doctrine more individualistic. Jana the Refulgent, unlike Emilio the Sage, did not hide her teachings because they were esoteric. She hid them because they were a gift given with love to only one person. That was me.

When my grandfather Tomás was alive, he did not like to be unaccompanied by other humans while staying in his house in Cuernavaca Morelos, because he was afraid of the ghosts that lived there. To attempt to exorcize the ghosts and so that they would not scare him, he placed in the doors blessed handicrafts made of palm leaflets (*Brahea dulcis*). These handicrafts are traditionally made to be blessed in Catholic churches on Palm Sunday. That is the anniversary of the day when Jesus triumphally arrived at Jerusalem five days before he was killed on the Holy Cross. On that day, his followers greeted him by displaying palm leaves (*Phoenix dactylifera*). This tradition originated from the Sukkot festival, when Jews rejoiced with their palm lulav. This way of celebrating was later used to rejoice at other religious events, such as when Judas Maccabeus took control of the Second Temple of Jerusalem. The palm handicrafts were not enough to allow my grandfather to feel safe inside his house, so he always invited a poor married couple to his house. They worked as his domestic workers and had to live in a small two-room house that was in his enormous garden. Several married couples lived there. Finally, a family arrived there to live with my grandfather just months before he would suffer in 1996 from the stroke that led him to become a disabled man seated in a wheelchair.

My grandfather died in 2000, but the family that he invited to live in his house kept living there. Their children grew up, so they stopped being teens and became adults. Their daughter Claudia had a sexual partner named Román. The original couple that my grandfather met decided to go to live in Huitzilac, Morelos. Their daughter Claudia and Román stayed. They had a son and a daughter. Román and Claudia were dangerous criminals. Román was a drug dealer; he sold illicit recreational drugs. Claudia worked as a prostitute inside of what formerly was my grandfather Tomás's house. As a result of her sex work, she got scabies, a skin disease caused by the mite *Sarcoptes scabiei*. Román and Claudia also abused their underage children by kicking them and by allowing pedophiles to have sex with them in exchange for money. As drug dealing, female prostitution, and child prostitution were illegal activities, Román and Claudia decided to prevent my family

from entering our house, so we would not discover what they were doing inside. Every time we arrived and knocked on the door, they threw stones at us so we would go away.

Román and Claudia decided to sue my aunts because, according to them, as they had already lived for a long time in this house, they would become the new owners. They wanted to become the new owners even though they did not pay electricity or water (H_2O) bills. They neither paid the house taxes. Román's father-in-law verbally abused my aunt Ana Reyes. She was so angry that a legal battle for the house ensued. My aunt Yolanda loved Román and Claudia, so she always said: "They are good kids. If they behave well, they can stay." Finally, my family won the trial, so Román, Claudia, and their children were evicted from the house. The judge witnessed the abuse performed against the children, but I do not know what happened afterward regarding that.

Jurisprudence

When I told Jana the Refulgent about my adventure in Putla, Oaxaca, she was very excited by what I experienced there. She told me that I lived a very exciting life full of thrilling events. She told me that that is what is more important in life. The kind of knowledge we learn from such experiences is of course something important as well, but equally important are the adventures to attain the knowledge. Jana the Refulgent thought that in fact some parts of science—such as publishing the results obtained, the impact factor, or the social importance of research—are not the best parts of it. The best is the experience of having worked on such a project by itself. The scientific knowledge that can be published is nothing else but the tip of the iceberg of all the knowledge acquired by the researcher, as according to Jana the Refulgent, what was learned was by far more than the formal academic outcome. All personal experiences and emotions felt by the researcher or explorer are equally important. Unfortunately, in many instances, such as in modern science, due to its reductionism, they are not as valued as they should be.

Birgitta the First, the sinister, went on a student exchange program abroad for a whole academic year. The time that she spent in Edinburgh from when she started bullying me until she left would have been unbearable without the help of Jana the Refulgent, who gave me the best spiritual gifts in my life. Jana the Refulgent told me that the best antidote against melancholy was socializing. It was looking for friends and talking to them. In this way, the mere extrovert social interaction would prevent me from spending the same amount of time thinking about my own depressive thoughts that were the memories of the abuse

performed by Birgitta the First. When Birgitta the First left, I realized that the techniques of Jana the Refulgent were the blessing that allowed me to resist and keep working to achieve my dreams even in an environment that was so evil. As soon as Birgitta the First left, all the blessings that Jana the Refulgent promised me became true.

Jana the Refulgent always talked about falling in love with nature to practice science as it should be. However, she was not an environmentalist and was highly against environmentalism as she was deeply anthropocentric. I think she was simply not as hypocritical as environmentalists. She behaved the same as them; the only difference was that she acknowledged that she destroyed the biosphere to live, as all modern humans do. On the other hand, environmentalists deny this fact, but they still contribute to the destruction of planet Earth as every human does in the Anthropocene.

One can think that Jana the Refulgent was as hypocritical as the environmentalists by saying that to live as a philosopher one must love nature and the Universe; and at the same time, Jana the Refulgent did not love planet Earth, did not do anything to stop the biodiversity crisis, and was not against the ecocidal anthropogenic impact on the environment. She was not a hypocrite. She behaved like that because she did not define nature as most people define it. Jana the Refulgent defined nature as all the physical and chemical laws that move the Universe. She thought that nature also included the matter, the energy, the space, and the time that are ruled by the universal laws. Most people, but not Jana the Refulgent, define nature as the parts of planet Earth that were not created by humans. This means all the biotic and abiotic factors of the ecosystems. In the definition of nature that Jana the Refulgent suggested, a high-technology airplane flying is as natural as a wild bird flying; both are made of atoms, and both are ruled by the same physical laws.

What Jana the Refulgent meant by falling in love with nature did not involve trying to preserve everything that was not made by humans that we can find on this planet. Neither did it involve attempting to ensure the future of the human species, or of any other biological species. What Jana the Refulgent meant by falling in love with nature was simply being fascinated with the beauty of mathematics and of the order that happens in the Universe. It entails wanting to know more about this. The eternal beauty that Jana the Refulgent loved will continue to exist even if the Earth disappears with all its biosphere, including humans. True natural beauty is by far more than humans and this planet. If you doubt it, just look at the heavenly stars in the night...

Asia the Mystic believed in extremely ancient ideas from ancient Mesopotamia,

Pharaonic Egypt, and Achaemenid Persia that were synthesized in the Jewish "Tanakh." She also believed in ideas based on ancient Greek philosophy and on the superstitions of the first Christians that were synthesized in the biblical "New Testament." Yet, she was a wise young woman with far more wisdom than her university classmates who had modern ideas. That is why I always looked for her, to learn, and so she would deliver oracles to me. This shows that the fact that an idea is "old" does not mean it is bad or low quality when compared to something modern. Ideas and texts ought to be evaluated by their own merits, not for how old they are. That is why it was good that I read "Philosophia Botanica" (1751). Old texts allow us to know not just what people of old knew, but also how people of old thought. It is impossible for us to imagine how 18th century biology was until we read it, and we notice that it has very important lessons to teach us for our modern life.

I socialized with my professors, not only with my classmates. That was one of the commandments that Jana the Refulgent gave me. We should not forget that for Jana the Refulgent, part of academic success entailed having a good rapport with our professors. This is useful because sometimes professors award better grades to the people they like. Moreover, they can give us more information on any topic beyond what was taught in the lecture. This extra information is not useful to get good grades in our exams, but it can help us to achieve the real aim that, according to Jana the Refulgent, is why we attend university. The main aim is not to attain good grades to get a document that can allow us to work. The main aim is to learn new stuff. That is why I always talked after lectures to all my professors. In that way I even learned more than my classmates. A good example of this is when I stayed in the laboratory when the other students left to see the microorganisms that we used in our lab classwork under the microscope. I was curious to know what their appearance was like.

Jana the Refulgent always thought it was exciting to meet eminent people to learn from them. That is why I consider my meeting with Ian Wilmut as one of the most important events in my life. Ian Wilmut cloned a mammal before any other research teams! It is indeed a rare opportunity to be able to learn about groundbreaking science directly from the person who developed it. We must do this on every scarce occasion we may have in our lifetime. Jana the Refulgent considered that we ought to surround ourselves with wise people so we can obtain a little bit of their wisdom. Furthermore, Wilmut was not just scientifically important. He was also culturally important, as his work was a landmark in popular culture, because he fascinated the world with what biology was able to do. Jana the Refulgent thought that holistic

wisdom was more important than just scientific knowledge, so interviewing Wilmut was very important, as he changed science, society, and culture.

Asia the Mystic prayed in front of the mosaic mural that looks as if it were Byzantine. Praying to the mural that was in Michael Swann Building might seem like idolatry. Nevertheless, Asia the Mystic was not idolatrous. Unlike other Catholics, she never prayed to icons or to sculptures that depicted saints, prophets, angels, or God YHWH Himself. In this way, Asia the Mystic followed the commandment against idolatry that God YHWH gave to prophet Moses in "Exodus" in the "Torah." As she did not need icons or sculptures to pray, she was able to pray everywhere at any time. According to her, the Deity is omnipresent. Therefore, it was the same for her if she prayed in front of the mural of the fauna of Galápagos Islands or anywhere else, as according to her, the Deity can be found everywhere. She did not pray to the mural or to the animals that were depicted in it. She prayed to God YHWH. In fact, the mural was only her spiritual tool to quickly reach a contemplative inner peace to concentrate more deeply on her prayers.

I believe it is worth using art as part of our spiritual exercises as Asia the Mystic did with the mural of Ecuadorian fauna. As philosopher Arthur Schopenhauer noted in "Die Welt als Wille und Vorstellung" (volume 1, 1844), looking at art is like gazing at the eternal Platonic forms. That is because art is something truly divine, as it makes us experience altered states of consciousness as much as entheogens. It is easier to reach a contemplative inner peace by gazing at masterful art than without gazing at it. Indeed, art is a path toward mystic worlds beyond our understanding.

Professor Colegrave had a great idea when he set as homework going to the National Museums Scotland. This set of museums housed in a single building is still like a Renaissance cabinet of curiosities (wunderkammer). Cabinets of curiosities were meant to be microcosms that would be small versions of the whole macrocosm. The macrocosm is all that exists. The National Museums Scotland are like a cabinet of curiosities because they do not exhibit only stuff from one discipline, but all human knowledge is depicted in their collections! Jana the Refulgent thought that the human mind should also be a microcosm that must be a mirror of the grand macrocosm. To transform our minds into microcosms, we must do something like what wealthy people from the Renaissance did. They filled their cabinets with curiosities, surprising objects. In the same way, we need to fill our minds with surprising ideas that mirror the whole macrocosm.

Asia the Mystic, in the same way as ancient Torah scholar Philo of Alexandria in "De Vita Contemplativa," considered that all humans were made equal by God YHWH.

That is because we all come from earthy matter, so we do not have any reason to fight each other for any tiny difference, as we are essentially all the same. That is why the battles between the emo versus punks and goths in Mexico City was a result of ignorance. Being an emo, a punk, or a goth does not make us significantly different; we are still humans and there is no need to fight, as our similarities are greater than our differences.

The worldview of Asia the Mystic was a creationist one, not evolutionist. Under an evolutionist worldview, all organisms are subjected to a continuous struggle to survive. Nonetheless, we should not understand that struggle as wars between human groups, as many social Darwinists such as General Friedrich von Bernhardi understood it. You can read this mistaken view in the book by Von Bernhardi (1911) titled "Deutschland und der Nächste Krieg." Now I shall explain what this evolutionary struggle means. If we have alleles that generate phenotypes which are more adapted for a given environment, we can survive better than organisms that have alleles that generate phenotypes which are less adapted to that environment. This is all that is the evolutionary struggle for survival. It does not entail armies fighting each other for money, glory, and political power. So even under the evolutionary paradigm, wars between different human groups are not justified.

Jana the Refulgent claimed that we must always be surrounded by good people that will allow us to become better individuals. In the same way we must avoid being close to bad people that may influence us to do vile acts or that might be a risk to our health and safety. That is why it was excellent that my family was able to evict Román and his family from the Cuernavaca house where my grandfather once lived. In that way, they got rid of bad, criminal people that might have harmed us in many ways.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 22. *THYSANIA AGRIPPINA*

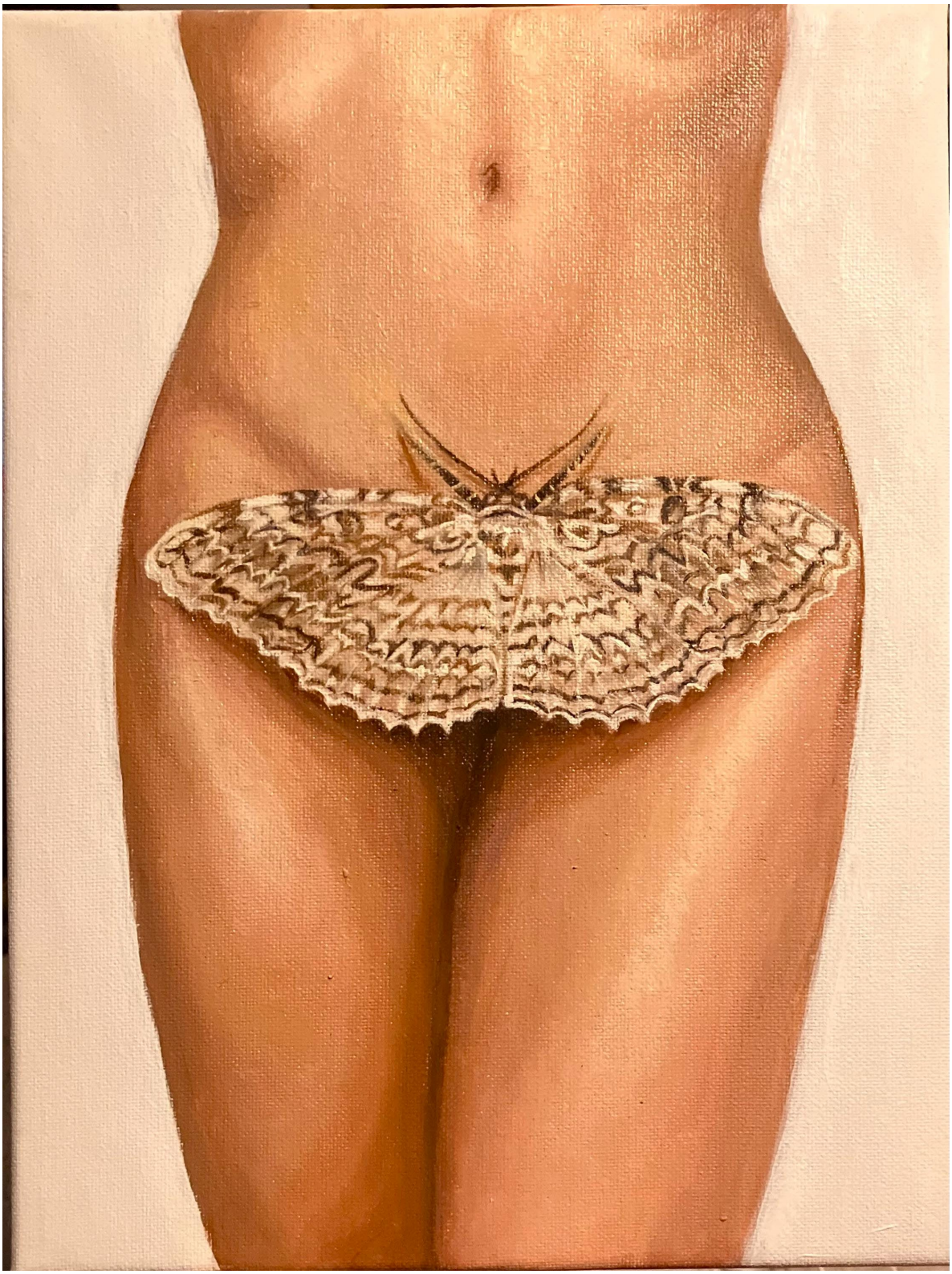
In 2008, I was interested in folklore and legends, so I wrote an article on an old Mexican legend in the magazine "Mastozoología Neotropical."

Professor Norman Wilson, my student adviser, once again set some homework for me so I would do it during the summer. He told me to read the whole textbook known as "Molecular Biology of the Cell" by Alberts et al. (fifth edition, 2007). He told me he would perform an oral exam to check what I learned after I returned to class. The book was so heavy, and it was more difficult to travel with it than to read it.

During summer 2008, I visited a magnificent botanical garden in London. It is the Chelsea Physic Garden. It is a medicinal plants garden. The best thing about it was that in the labels, there was information regarding the illness that the plant healed, and the structural chemical formula of the active pharmaceutical ingredient. Learning about pharmacology was an exciting experience! This garden still looks very ancient. It reminds us of the time of European colonialism when it was critical to obtain economically important natural resources from all conquered lands. The reason is that most of the plants in this garden are exotic and were used in those times of old.

Professor Jerzy Rzędowski sent a letter of recommendation to Professor Nelly Diego, a lady that worked in the Faculty of Sciences of the Universidad Nacional Autónoma de México (UNAM). The letter was to recommend me as a botanist so I could improve my skills determining plants during my holidays in Mexico. Nelly Diego was the research group leader of a project that involved publishing the "Flora of Guerrero, Mexico." I worked as a volunteer determining the herborized plants at the laboratory of vascular plants (19.324328717882306, -99.17982811640226). I worked determining plants of the family Polygalaceae.

In the lab, I met a professor whose name is Jorge Rojas. He is a plant scientist. Like Zafeiria, he believed in extraterrestrial people. However, he did not believe in them because of having faith that they existed, as Zafeiria did. Jorge Rojas ended up believing in them because of a firsthand encounter that he claimed to have had with them. He said that happened in the avenue named Investigación Científica when he was going from the buildings of the Faculty of Sciences to the Universidad station of the underground subway rapid transit. He watched an unidentified flying object (UFO) in the sky that looked like an alien



***Thysania agrippina* (Cramer, 1776) (Lepidoptera: Erebidae)**

Illustration made by Elen (Ansekenamun). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 863.**

spaceship. I would like to think that only the Earth is inhabited by biological entities. This would allow it to be the most special place in the whole Universe. As Sigmund Freud (1917) said in "Eine Schwierigkeit der Psychoanalyse," one of the three humiliations of humanity was the discovery that the Earth was not at the center of the Universe. Discovering that there is life on other planets would mean the Earth would stop being in our minds the center of our Universe, and therefore, would humiliate humankind. When Freud referred to the discovery that the Earth was not at the center of the Universe, he of course did not mean the discovery of alien people. He meant the heliocentric model of Copernicus, but his quote can be applied equally to the discovery of extraterrestrial life, if it ever happens.

The existence of complex organic molecules in asteroid (162173) Ryugu, and in meteorites such as the Murchison or the Northwest Africa 801 (NWA 801), shows us that they well could have been synthesized by extraterrestrial living creatures, or at least that there are enough building blocks of life in other worlds to allow life to appear there. It is also possible that what Jorge Rojas saw was not an extraterrestrial spaceship, but a tlahuelpuchi, one of the flying women that supposedly looked like fireballs that my grandfather Tomás feared so much... Nevertheless, both hypotheses are strange, and it is possible that none of that exists. Jorge Rojas was a serious, frank man. He was not the sort of person that would spread false rumors or bear false witness to be the center of attention.

Thursday the 12th of February 2009 would be the 200th anniversary of the birth of Charles Darwin. Zafeiria always told me about everything that she read in her magazines about that, and plenty of people got interested in the main founder of the theory of biological evolution and his legacy. I was also deeply interested in him at the end of summer 2008, so I wanted to know what people thought about him. I conducted three surveys to find out the public opinion regarding Charles Darwin. The first one was with my fellow students at university. The second one was with the average people of the United Kingdom. The third one was with the scientists that were fellows of the Royal Society. It was enjoyable knowing more about the famous 19th-century genius. (If you want to know the results of the survey, please see Appendix F.)

Zafeiria claimed that the main reason why most people cannot understand molecular biology is that it uses too many abbreviations. If instead of using abbreviations it would use the full name of a word at least the first time that word is

stated in a text, such texts would be by far more understandable. I believe in Zafeiria, and in this book I have attempted to follow her commandment.

In September 2008, Birgitta the First returned to Edinburgh after going on a student exchange program abroad. I was feeling anxious and worried. From January 2006 to May 2007, Birgitta the First liked to look for me to ruin my life. The worst thing about this was that during that time, I still felt sexual desire and love for her, so her verbal abuse was very painful. Magdalena was as anxious and as worried as me. She knew that before dating her, I was deeply in love with Birgitta the First. Hence, Magdalena thought Birgitta the First might become her love rival. This was of course worrisome for Magdalena because she wanted to become my significant other. Magdalena told me that Birgitta the First was a control freak. Thus, I needed to do something that would break her control over me.

At that time, I had a mariachi hat that I bought in Zacatecas nine years before. Magdalena suggested that in the first lecture I would have, I should sing a serenade to Birgitta the First in public while wearing my mariachi hat. That would make her feel out of control of me. Therefore, she would stop psychologically torturing me because she would feel powerless over me. It was easy for me to sing regional Mexican songs, as it was my pastime when I was Pancho's friend in the English language academy of Saffron Walden. I rehearsed the regional Mexican song titled "La Valentina" many times. It is about a soldier who fought in the Mexican Revolution war that sings about risking his life for his love, Valentina. I exchanged the name "Valentina" for "Birgitta" in the lyrics of the song. As Magdalena suggested, I sang the song to Birgitta the First in public in front of all my classmates in the large classroom of Darwin Building in King's Buildings on Monday the 22nd of September 2008 before a lecture of Professor Fantes (55.92161865078527, -3.171021754919136).

Birgitta the First felt that I challenged her in public. She threatened that if I ever paid attention to her again, she would take revenge on me. The next day I sat in a chair in a classroom in Joseph Black Building where we would have our lecture. After Birgitta the First entered inside the classroom, she sat next to me and did not stop looking at me during the whole lecture. She did not even look once toward the lecturer and his slides. I knew that only turning my head to look at her would make her take revenge against me because of the serenade of the previous day. That is because staring at her would be paying attention to her. That was something that she banned me from doing.

I went to the Old Medical School to see Professor Norman Wilson, my student adviser, and asked him if he would please

allow me to skip a year because the stress that Birgitta the First was causing in me was unbearable. He agreed. During the length of that academic year, I returned to Mexico City. I would not return to Edinburgh until evil Birgitta the First would have finished her bachelor's degree. The serenade was necessary because before that public display, Birgitta the First, would not have dared to threaten me. If that would not have happened, I would not have felt the need to run away from her and from her vileness. Kirsty Morton was very worried for me and was sad that I left...

As a result of the wars on terrorism in Afghanistan and in Iraq, petroleum prices increased. Therefore, the Federal Reserve System lowered the interest rates to attempt to avoid a reduction in economic growth. The low interest rates that lasted a long time allowed real estate companies to sell large amounts of houses that financial institutions happily paid with mortgage loans in a prodigal fashion. As banks did not expect that interest rates would increase, risk-taking activities such as subprime lending became ubiquitous. Eventually, to control inflation, the American government had to increase the interest rates. This led to the 2000s United States housing bubble. Plenty of financial institutions went bankrupt. This event was known as the Subprime Mortgage Crisis. This created a horrible recession in the United States of America that soon spread all over the world, known as the Great Recession.

This atrocious event showed that the American government was wrong in believing that war and not a diplomatic solution was something good for them and their economy. Average Americans harshly paid the price of the decisions of President Bush the Younger. The 2000s Global War on Terrorism was a war of President Bush the Younger against his own country, the United States of America. I firmly believe the loser of this war was the United States of America.

While the United States of America was distracted fighting the Global War on Terrorism, China was slowly becoming more and more powerful. Its government wanted to end the hegemony of the United States of America in world politics.

Almost all the species of microlepidoptera in Mexico that were studied by science and that I had photographed in the Wandsworth Store of the Natural History Museum, London were collected by naturalist Herbert Huntingdon Smith. He collected most of them in two localities: Teapa, Tabasco and Amula, Guerrero. The last place is not named Amula anymore. Now it is known as Almolonga, Guerrero. To be able to discover new species of microlepidoptera, I required to know the ones that were already known. That would also be useful to me to place the new ones in

the right families and genera. So, I decided to go to the same places visited by Herbert Smith to collect the already-known species. In addition to these sites, I also collected in other new sites throughout the country. During my expeditions, I frequently observed enormous and startling good-looking lepidopterans such as *Thysania agrippina*, the largest species of Mexican lepidopteran. I also saw other gigantic species such as *Phassus triangularis*, *Ascalapha odorata*, *Thysania zenobia*, *Rhescyntis hippodamia*, *Caio championi*, *Eupackardia calleta*, *Rothschildia orizaba*, *Rothschildia cincta*, *Rothschildia lebeau*, *Antheraea oculea*, *Antheraea godmani*, and *Antheraea montezuma*. Nonetheless, I was not interested in them. I was a microlepidopterist, so I was only interested in the tiniest moths!

During my 2009 expeditions, I saw several charismatic animals. I can remember that during sunset in Teapa, Tabasco, all the wild howler monkeys (*Alouatta palliata*) that were in the trees simultaneously roared. I saw a wild bobcat (*Lynx rufus*) on the mountainsides of volcanoes in the mountain range known as the Most Holy Iztaccíhuatl, Puebla. Also, in Iztaccíhuatl, I saw inside a cottage something peculiar. I observed how a moth (that belonged to the family Pyralidae) burnt its wings by flying toward a candle. Another marvel that I saw during my expeditions was a huge flatworm that was 40 cm long. It was a land planarian that is known as *Bipalium kewense*. I saw it in Nanchititla, State of Mexico. I also saw a wild American black bear (*Ursus americanus*) and a wild maroon-fronted parrot (*Rhynchopsitta terrisi*) in some mountains known as the Cumbres de Monterrey, Nuevo León.

In the expedition to Cumbres de Monterrey, my parents and I also saw on a dirt road at night a black plastic bag that contained a human corpse that was recently murdered. This man was one of the victims of the Mexican Drug War between drug trafficking organizations that was started by President Felipe Calderón (who was in power at the time). Calderón attempted to eradicate all illegal drug cartels that were the enemies of the illegal organized criminal syndicates which bribed him and which he protected. He thought in that way, the criminal organizations that he supported would obtain a monopoly over the illegal drug trade. As a result of the Mexican Drug War, crime in Mexico increased exponentially and the number of drug mafias was not reduced. My father was severely shocked and upset after having seen the dead guy. I was not. Emilio the Sage had already trained me to face death. My father was so stressed that he got lost during that night in the city of Monterrey while he was driving the van. It was impossible for him to return to the hotel where we were staying. I guided him until we reached the hotel.

Also in 2009, I traveled to Tamaulipas to look for a wild bird as part of my birding hobby. I was looking for the wild turkey (*Meleagris gallopavo*). I successfully saw it.

That very same year, there was a pandemic outbreak known as the 2009 swine flu pandemic. It was caused by an *Influenza A virus* subtype H1N1. This virus was zoonotic. It already existed for a long time in swine (*Sus domesticus*) living in Mexican farms, but it infected people in 2009 and spread all over the country. To protect people from this illness, President Calderón ordered a national lockdown. Public spaces and indoor stores were not allowed to open. Schools were not allowed to provide classes to students. People working indoors were not allowed to do their jobs. All Mexicans were asked to spend that time inside our houses. Many people died because of this illness. Some acquaintances of my family died during the outbreak.

I read the book titled "Grundzüge einer Theorie der Phylogenetischen Systematik" by Willi Hennig (1950). This book is outstandingly marvelous! Hennig should be considered a genius for having written it. Unfortunately, he is an underrated author. Before Hennig, classifications of organisms were just based on similarity. Hennig introduced the idea of making an evolutionary system of classification based on groups that included descendants of common ancestors. Without this key insight, there would not be modern molecular phylogenies. Thousands of people make a living writing several papers about molecular phylogenies each year. I do not know why Hennig is not considered as one of the best biologists who have ever lived. It is indeed true that in modern times we do not make phylogenies using the exact method he suggested, but everything changes in science. He is not as admired as he should be.

In 2009, a new form of currency was invented. It is known as cryptocurrency, and it entails having money that is not issued by governments. Unfortunately, to validate transactions and to get money for doing so, more energy is used than to use any other form of currency, so it pollutes and harms the environment. One would think new technologies would be more environmentally friendly, but some of them are just worse than the old ones.

In 2009, I started to find monk parakeets (*Myiopsitta monachus*) in Parque Ecológico de Xochimilco every time I went there to watch birds. This species was uncommon in Mexico when I was a teenager. The first time I saw feral individuals of this species was in Madrid, Spain in 2004, in a park known as Casa de Campo. In Mexico there is a disgusting political party known as Partido Verde Ecologista de México (PVEM). The members of this party in the house of representatives and in the senate suggested a law to ban the sale of native parakeets, parrots, parrotlets, and macaws.

This law was approved. Therefore, a large amount of exotic South American monk parakeets was imported to Mexico to satisfy the demand for parakeets. As usual, some people bought them to release them. Soon, this pest bird became a threat to maize (*Zea mays*) crops. It is also a territorial and aggressive invasive species, so it attacks native wild birds.

In the 2000s, there was an old technology known as compact disc read-only memory (CD-ROM). They were flat, rainbowy-colored discs that one could play on computers or video game consoles. I bought a CD-ROM titled "The Torner Collection of Sessé & Mociño Biological Illustrations" (1998). It included most of the illustrations made for the Royal Botanical Expedition of Sessé & Mociño (1787–1803). This was an expedition organized by King Charles III of Spain to catalogue the biodiversity of New Spain. Many researchers participated. Martín de Sessé was the director of the expedition, who was appointed by the king. Atanasio Echeverría and Vicente de la Cerda were the illustrators engaged in painting the specimens collected. Most of the materials gathered were sent to Spain. De Sessé died in 1808, so Mociño, another naturalist who participated in the expedition, oversaw the scientific research. The French invaded Spain during the Napoleonic Wars and Mociño was in favor of them. When Spain became independent, Mociño was exiled from Spain as a traitor and then lived in France.

There he met botanist Augustin de Candolle who described many of the species depicted in the illustrations. De Candolle commissioned copies of them. For more than a century, the original illustrations were lost until they were rediscovered and sent to the Hunt Institute for Botanical Documentation. It published the CD-ROM that I bought. The illustrations were very important for me. I used to print them with my computer printer. After looking at them carefully, I wrote down by hand the scientific name of the plant below the image. These names were compiled by Rogers McVaugh. In this way, I was able to distinguish the species of plants and to memorize their names. These illustrations are an unmatched resource to learn the names of wild Mexican plants, as a wide number of species of different families are depicted.

There is a mystery hidden in the illustrations. Illustration 0064 shows the plant *Nama dichotoma*. Below it, there is a hidden drawing. I amplified that drawing using "Microsoft Paint" (2007). I painted the faint pixels of the drawing in a bold color, and I discovered that the hidden drawing was the Virgin St. Mary of Guadalupe! I was inspired by these illustrations to commission the plant illustrations in this book you are now reading. Like the old Sessé & Mociño

illustrations, I commissioned them to be made with handmade, traditional art. I commissioned them to Albino Adelaido Luna and to Irina Korobeichuk.

When in 2009 I was printing the Sessé & Mociño illustrations, I noticed that there were two images of the hand tree (*Chiranthodendron pentadactylon*). This species of tree has bizarre flowers. They look a bit like human hands because their stamens look like fingers. Both illustrations depict the same individual. It lives in Toluca, State of Mexico, and I found it so curious that I wanted to visit it in person. In fact, the tree of Toluca is growing inside a private house, and it is not a wild plant. The owners sell the flowers because it is a medicinal plant. This tree is so historical that it has a commemorative plaque next to it to honor it. Even the street where it lives is named after it and called "Árbol de las Manitas."

For a long time, Toluca inhabitants believed the only tree of this species was this individual. They said there was no other tree like it anywhere else, as according to legend, God YHWH (Allah) decided that there should be only one individual of this species. Hence, no one dared to propagate it. In fact, there were many wild trees like it, but at the end of the 18th century and at the beginning of the 19th century, botanists did not know where they lived, and the folk of Toluca believed in old wives' tales. Thus, the Toluca tree became a celebrity. The type specimen for this species was obtained from this individual. Even in modern times, plenty of botanists have a lot of fondness for the Toluca tree, as if it were someone very special.

Also, in Chalma, State of Mexico, there is a highly worshipped tree. It is a Montezuma cypress (*Taxodium mucronatum*). It is considered as even more worshipful than the Montezuma cypress of Santa María del Tule, Oaxaca. The reason is that it grows above a holy spring. When I saw this Montezuma cypress, it had plenty of objects such as walking sticks, ribbons, and pieces of cloth hanging from its branches. These objects were symbols of miracles that Jesus grants to his followers. Some followers of Jesus placed them there to thank him for his help. These miracles did not happen 2000 years ago, when Jesus lived—they are supposed to happen nowadays. The religious pilgrims who visit the church bathe in the holy spring while wearing garland crowns made of inflorescences. Afterward, they present the garlands in the church as holy offerings. The garlands consist of flowers and inflorescences of *Lilium*, *Rosa*, *Dianthus*, *Bougainvillea*, *Gerbera*, and *Chrysanthemum*.

I was going to return to Edinburgh on Wednesday the 9th of September 2009. I was going to fly to London overnight. On the morning of that day, I was very frightened. The reason was that on the radio and on television, it was said that there was a

terrorist attack in the Benito Juárez International Airport of Mexico City. The worst thing about that was that my flight would depart that night from that airport! Fortunately, the supposed terrorist attack was not a terrorist attack. Josmar Flores Pereira, a religious fanatic that was a pastor of a Christian evangelical denomination, hijacked an airplane that arrived in Mexico City from Cancún. He claimed he had a bomb onboard and that he would blow up the airplane unless President Calderón would grant him an audience immediately. Josmar claimed that God YHWH told him that in 2012, there would be a dreadful earthquake in Mexico and that he wanted to warn the president about that. As a matter of fact, there was no bomb inside the airplane, and there was no devastating earthquake in 2012... When Josmar was arrested, the police officers asked him: "What did you smoke?" As it was a false alarm, my flight departed that night as expected.

On the flight from Mexico City to London, I talked to a lad who told me that he was a philosopher. He told me what he knew, and I was fascinated by his knowledge and by the way he structured his speeches. After that chat, I wanted to be like him. This guy suggested that I read the "Dialogues of Plato" so I could learn the arts he knew. As soon as I reached Edinburgh, I bought them. As I was reading about ancient Greek philosophy, I realized that such daily philosophical study would be extremely useful in case I would find another woman as Birgitta the First that would attempt to emotionally harm me in a similar way as her. After having such a horrendous experience, I needed to be cautious and to plan a strategy to avoid another bad woman ruining my life. The advantage of my new daily philosophical study was that it was very consistent with the doctrines that Emilio the Sage and Jana the Refulgent taught me because they applied philosophy in everyday life, even though they never studied a philosophy degree at university.

If there was something important that I learned from Emilio the Sage, and from Jana the Refulgent, it was that the great problems of life can be solved using philosophy. Now, with my daily philosophical study, I was going to emulate such methods to face life's challenges. The daily philosophical study entailed using the techniques of Jana the Refulgent that she taught me to get top grades. However, this time, they would not be used to revise school subjects. Now the same technique would be used to study philosophy that could be applied in my daily life. In this way, the teachings of Jana the Refulgent would not be used to pass university exams, but to pass the real-life exams that we face in the form of life's challenges.

Once classes began, I realized I did not know most of my new classmates. I just knew Martyna Popis because I thought she was

sexy because she had an athletic, fit body, and her buttocks were attractive. I befriended her and I also became a friend of another young woman named Clare. My lectures during senior academic year were in very small classrooms with small groups of students. Some of my lecturers were highly renowned experts such as Professor Jean Beggs and Professor Claus Nerlov.

Professor Fantes was always angry. Life was unfair... Fantes is a misunderstood genius because he was one of the key people who worked with Paul Nurse. However, no one rewarded Fantes for his contribution to the discovery of cyclin-dependent kinases (CDKs)...

I also had a lecturer whose name was Professor Stancheva. She was fired eight years later because she committed fraud by modifying the images of her electrophoresis gels using "Adobe Photoshop" (1999–2003). During my first days of classes, I suffered from influenza. Magdalena did not visit me while I was ill. After that she visited me and excused herself for not meeting me before. Like in 2008, I kept spending time with her.

As Birgitta the First was not attending the University of Edinburgh anymore, I wanted to start a new, happy life. Therefore, I decided to contact Jana the Refulgent to ask her what I should do to fulfill that aim. According to Jana the Refulgent, the best way to live a stress-free, joyous life was having many acquaintances and friends so I could speak with them and socialize a lot with them. She said that social interaction by itself allowed one to be happy and to attain good results in whatever one wanted in life. Jana the Refulgent suggested that I should join the university student societies that I fancied, amongst them the yoga club, as Jana the Refulgent practiced yoga as a sport and to relax. Since then, I have practiced yoga intermittently. I also asked Jana the Refulgent how to get a significant other because now that Birgitta the First would not bother me anymore, I was ready to fully love a woman. Due to the advice of Jana the Refulgent and to my new revitalization doctrine focused on philosophy, I started to attend the meetings of the University of Edinburgh Philosophy Society and of the University of Edinburgh Humanist Society (55.94502795242859, -3.188544744274037).

Meeting philosophers such as William Peden and psychologists such as Stuart Ritchie, together with my studies on the "Dialogues of Plato," transformed me into a philosopher in almost no time. I thought and I still think that becoming a student of philosophy was the greatest desire that Emilio the Sage and Jana the Refulgent had when they trained me. In this way, I felt I was repaying them for the favors they did by teaching me.

Stuart Ritchie and William Peden were the wisest members of the student societies that

I attended. They often had opposite views. I never dared to interrupt them while they were speaking, because I learned a lot from what they said. Such wisdom was not just contained in the meaning of what they were saying, but also in the way they stated their ideas. By this, I mean their rhetoric and their dialectical methods. Their speeches were as good as those of Cicero, the ancient Roman politician!

Years later, Ritchie became a right-wing intellectual. His job was criticizing science as inaccurate and unreliable. He also campaigned against left-wing ideology. He sold plenty of books and was a well-known journalist. However, he later stopped doing that because he worked at an artificial intelligence company.

During autumn 2009, Magdalena disliked that I spent time with the folks of the Philosophy Society and of the Humanist Society. She claimed that I wasted a lot of time with them because she wanted me to spend all that time with her. To prevent me from spending time with them, she scared me. She said that if I kept going to their meetings, I would befriend a young woman there. According to Magdalena, that woman would be another Birgitta that would be the same as the first one who previously ruined my life. Nevertheless, I kept meeting my friends, as I thought Magdalena was being too manipulative by trying to rule my life.

As I said before, the reason I initially stopped courting Magdalena and ended up becoming Natalie's boyfriend was because Magdalena was a bit strange. Her strangeness did not have to do with her black Gothic Lolita outfits, or her milky pale skin. On her left breast, Magdalena had a tattoo of a venomous spider (*Phoneutria nigriventer*). She also had a tattoo of a five-pointed star on her wrist. Hence, Asia the Mystic claimed it was clear evidence that she secretly worshipped the Devil. 19th-century spiritual guru Éliphas Lévi claimed that a pentagram star with only one point on top of it and two below it was the Star of Bethlehem. That is the star that appeared when Jesus was born. It allowed the Zoroastrian magi to locate Jesus so they could worship him. This star was, according to Lévi, obviously associated with Jesus. Thus, the inverted star—the one with one point below and two points above—was, according to Lévi, the opposite of the symbol of Jesus. That is the symbol of the Devil.

Lévi wrote this in his book "Dogme et Rituel de la Haute Magie" (volume 2, 1856). Edward Waite and Pamela Smith made the inverted pentagram popular as a symbol of the Devil among fortune-tellers due to their famous tarot deck. Later, spiritual guru Anton LaVey introduced the inverted pentagram to 20th-century popular culture. He considered that it was a symbol of opposition to Christianity in general. So,

for him it was a symbol of not believing in any Deity and hedonism, the values that are opposite to Christianity. LaVey did not think it could be used to invoke the Devil because as a non-believer in any of the Abrahamic religions, he did not believe in angels.

Magdalena was neither a hedonist nor a non-believer in Deities. She did not worship the Devil either. Nonetheless, one of the tarot cards of her tarot deck had an image of the Devil. It is likely she knew about the inverted pentagram from that card. Magdalena enjoyed doing tarot readings in her apartment. She always performed them during nighttime when the Sun was not visible in the sky. She drew the curtains before a tarot reading so her living room would be darker, and she always lit a candle on the table before starting.

Asia the Mystic thought that tarot cartomancy was a form of Devil-worship. What is indeed true is that Magdalena admired Adolf Hitler, the leader of Nazi Germany during the time of World War II. I strongly disapprove of both Hitler and Magdalena's belief that he was a great man. During British wintertime, when the daylight is scarce throughout each day, Magdalena liked to visit the Edinburgh graveyards after the sun set, when it was already nighttime. I often went with her to graveyards when it was dark. She claimed that graveyards in the middle of the night are very romantic. Magdalena was not entirely mentally healthy. She sometimes practiced self-harm by cutting the skin of her arms with a box cutter. When she suffered from nervous breakdowns, she tearfully cried while she laughed out loud at the same time. Her sister Alida locked herself inside her bedroom every time Magdalena had a nervous breakdown, as according to Alida, her sister was dangerous at such times. Before I met Magdalena, she was once admitted to a psychiatric ward. She was sent to the asylum because she threatened to injure a girl who was her friend, and she chased her while holding a bladed weapon.

I believed Magdalena when she told me I could find another Birgitta that could be the same as the first one. I truly felt safe while being close to her, because if the second Birgitta attacked me, Magdalena would protect me from her. I ended up fully trusting Magdalena because I feared Birgitta the Second a lot. Magdalena told me that she wanted to marry me. She loved showing me wedding dresses and wedding invitation cards in the Edinburgh shops that we visited. She always kept talking about how beautiful it would be that we would get married. My mother was dismayed by just imagining I could marry Magdalena. My mother told me not to do that. My mother said that Magdalena herself was Birgitta the Second! She, of course, was not.

Magdalena's family was from Transylvania, Romania. They were aristocrats. She was

always proud that before the end of World War I, her family was part of the peerage. Magdalena was a member of the House of Arz von Straußenburg, part of the former Austrian nobility. We should not forget that Transylvania was once part of Austria-Hungary. Magdalena's family was one of the many families of Saxons that arrived in Transylvania with the Teutonic Knights during the Middle Ages. European noble families possess hereditary coats of arms. Magdalena's hereditary coat of arms is an ostrich (*Struthio camelus*) eating a metallic horseshoe inside a castle. Above the castle is the eagle (*Haliaeetus albicilla*) that was the national symbol of Transylvania. Magdalena's baroness crown was above the coat of arms.

The reason why the ostrich was eating a horseshoe in the shield is the following one: Al-Jahiz in his "Kitab al-Hayawan" states that many medieval Muslims believed that ostriches digested metals in their non-ionic crystalline forms that occur when their atoms are arranged in metallic bonding while being pure or in alloys. This medieval legend is of course false. The eagle in the coat of arms has been the symbol of Transylvania since the time when the House of Báthory ruled it. That is because King Stephen Báthory ruled Poland. The white-tailed eagle is the symbol of Poland because the king that founded Poland saw a nest of white-tailed eagles in the place where he established his city.

As Magdalena was very happy about having a coat of arms, I decided to have one myself. My shield in my coat of arms has a lepidopteran that belongs to the species *Ascalapha odorata*. A crescent moon flanked by two stars is found above it. My shield was blazoned together with the whole coat of arms by Alfonso de Ceballos-Escalera and professionally painted for the first time by Carlos Navarro Gazapo in 2018. The version of my coat of arms that is depicted in this book was painted by Michelle Maiden (**page 4**).

The dissertation that would allow us to graduate as biologists was an essay that was worth as many points as a whole course. Furthermore, the grade that we would get for writing it would appear in our transcripts. At university, Professor Fantes, who was the program organizer of genetics, told us about the dissertation topic. The topic was not optional. All of us had to write an essay about the same topic and with the same title. This was the title of all the dissertations: "Will it be possible to decipher all the traits of a multicellular organism from the sequence of its genome alone in 20 years' time?" Apparently, a developmental biologist and a New Ager placed a wager about exactly that topic, and we had to evaluate whether it was possible. (If you want to read my dissertation, please see Appendix G.) In addition to the dissertation, to graduate with honors, we were required to work as interns in a

laboratory to learn the techniques used in biology research.

The members of the University of Edinburgh Humanist Society were deeply interested in learning about the paranormal. Their meetings were always attended by Professor Caroline Watt, the parapsychology expert at the University of Edinburgh. Parapsychology is a discipline that attempts to study the paranormal using the tools of psychology. In the Humanist Society, I met Professor Chris French from Goldsmiths, University of London. He is a famous anti-pseudoscience activist that studies the paranormal. He gave us a talk and I chatted with him a lot after it in the Doctors Pub. It is likely that the most peculiar person in that society was Ash Pryce. Like naturalist Alfred Russell Wallace, he was interested in spiritualism. That led him to become an illusionist. Due to his interest in the paranormal, he worked as a tour guide. He guided ghost tours. In the place where he worked, there was a Wiccan church. Pryce was disappointed when he learned that the ghost stories were not true and that in the temple, plenty of gullible young women were sexually harassed. Therefore, he became a militant anti-pseudoscience activist.

On Hallowe'en 2009, Pryce performed a private show of illusionism for the Humanist Society. He performed a fake surgery where he apparently made an incision in the abdomen of Alexander, the archaeologist. Apparently, plenty of blood came out of his body. At the end, he was supposedly healed. After this, Pryce performed a hoax Victorian spiritualist séance. He performed all the tricks displayed by mediums. This was of course not true magic. Pryce showed us the tricks he used. His show was amazing! Eventually, Pryce became a professional illusionist.

During my senior year, I lived in a building in front of the Old College of the University of Edinburgh. Inside the Old College was the office of the university president, the university art gallery, and the Edinburgh Law School. From my window, I could see the Old College dome. On top of it was a hefty sculpture of God Prometheus, a titan from the Graeco-Roman Olympian religion. It was totally covered with valuable gold! In this statue, the divine Prometheus is holding the torch of knowledge with the sacred fire that he stole from the Deities to give as a gift to humanity. That gift is all knowledge, wisdom, reason, and ingenuity.

Charles Darwin took some medicine lectures at the Old College. Darwin Building in King's Buildings was named after him. Inside the Old College, a group of rich and powerful members of the gentry and the nobility meet from time to time. New members are allowed to join them by invitation only. They perform mysterious rituals. When they meet to discuss matters, such meetings can only be attended by members of the society. The name of this

club is the Speculative Society. It was founded by the Freemasons in 1764.

I lived in a bedroom above a Blackwell's bookshop (55.947834182705854, -3.186202153662661). I really liked living there because I frequently went downstairs to flip through the books in my free time. In the building where I lived, there was a commemorative plaque that stated that the Royal Infirmary of Edinburgh was opened in this place in 1729. The University of Edinburgh medical students worked as interns there. At the time I lived in Edinburgh, the Royal Infirmary was not there anymore. It was in Little France, where some of my classmates such as Rebecca took microbiology lectures and laboratory classes. Rebecca's legs were gorgeous, and her hair was golden—she was a stunning young woman!

The place where I lived was quite historic. The only disadvantage of living there was that my housemate who lived in the next bedroom always verbally abused me. She was also a biology student at King's Buildings. She was furious every time I made noise inside my bedroom and did not allow me to make telephone calls or even to talk in person with Magdalena, as according to her I should not even speak. She wanted me not to make a single noise all 24 hours of the day. The good part of this is that when this young woman started to bother me, I rarely spent any time in my bedroom. I would say I almost lived all the time in the apartment where Magdalena and her sister Alida lived (55.960948917268524, -3.1851995528094776).

Magdalena had a deeply negative worldview. She said that she had so many experiences throughout her life that she had already experienced everything that a human being can live. She claimed she had lived as many experiences as if she were 70 years old, even if she was just 22 years old. As a result of her life experiences, she said that she was not impressed anymore by the achievements of other people, so she admired no one. She also learned that one should not be excited by any idea and that one should not idealize people. She claimed that behind everything that seems good or awesome, there is always a nasty and vile reality. She also said that life is always full of misfortunes. She claimed that in her life, as soon as a misfortune ended, a new misfortune always happened. She thought that in this life, there is no escape from anxiety and suffering, that we live perpetually immersed in them.

These ideas were like what Mr. Robert taught me when I was studying high school in Mexico. However, Mr. Robert thought that we can have trust in recreational drugs as a form of escapism from all life's misfortunes. Magdalena did not idealize drugs. She thought there is no possible way to escape from misfortune. I dislike both Magdalena's and Mr. Robert's views. I do not know how Magdalena claimed to have experienced everything that can be lived in a

human lifetime, given that she did not live an exciting life full of adventures. If someone would tell me that my collegemate Toby Nowlan lived everything that can be lived in a human lifetime, I would believe such person. He has traveled to plenty of exotic lands, through tundra, deserts, temperate forests, tropical rainforests, and the open sea. That man has truly lived everything that a human can experience. One can read the whole "Parallel Lives" by Plutarch, yet the knowledge one will acquire regarding how to live life will pale in comparison with what life has taught to the amazing Nowlan!

In late 2009, I was acquainted with a birdwatcher named Héctor Gómez de Silva. I met him because he was an eBird reviewer and I sometimes sent lists to that website. While exchanging emails (electronic mails) with him, we decided to write an article about the history of birding in Mexico. We wrote all the paper without having met in person. I was in the United Kingdom, and he was in Mexico. We were able to do this because everything was done using the Internet. What made me write this article was the large number of birdwatchers that were spotting birds in Parque Ecológico de Xochimilco in 2009. I was surprised that there were so many people engaged in this hobby, because back in 1993 when I started birding in Parque Ecológico de Xochimilco, I was the only birdwatcher there. That being said, I wanted to know how this hobby became so popular in Mexico.

It seems that the first birders were foreigners who did it for pleasure. As there was a significant demand for birding infrastructure and for tourist guides that were specialized in birds, soon there was a noticeable increase in offers for these kinds of services. Initially these businesses were led by foreigners, but gradually they were also organized by Mexicans. Environmental scientists and ecologists realized that birdwatching was a lucrative activity based on local biodiversity. Hence, educational institutions, government agencies, and non-governmental organizations instructed many Mexicans how to bird so they could have a new source of income. This did not just benefit the newly trained birding guides. It also benefited the organizations that taught them their new skills, because these organizations obtain extremely large sums of money to protect the environment, so they needed to somewhat justify their large income. Teaching birdwatching skills was a good excuse. At the beginning, Mexicans birded because they loved the money that this gave them, not because they loved the birds by themselves.

Nevertheless, as time went on, there were also Mexican birders that loved the hobby. The Internet allowed there to be a website such as eBird. Social media platforms like eBird and other Internet websites allowed birding to reach more people in a simple and

enjoyable way. As a matter of fact, eBird is a bit like a bird Pokédex. I mean like the Pokédex in Pokémon games.

During the Christmas holidays 2009, I at last witnessed a flock of Montezuma quails (*Cyrtonyx montezumae*) after looking for them for a long time. I spotted them in a *Quercus* forest not far from El Astillero, Hidalgo, Mexico. Within birding circles, a nemesis is a bird that we cannot find even if we work very hard to find it. Usually, others can find it more easily. Thus, we work even harder to find it. By being able to spot the quails, I was able to find my first nemesis bird after looking for it for more than a decade! It was my lifer number 1264 in my life list, according to the "Clements Checklist of the Birds of the World 6.4" (2009). After having spotted the quails, my next nemesis was the mountain plover (*Anarhynchus montanus*). I was not able to find it until 2016, over the underground cities of the prairie dogs (*Cynomys mexicanus*) in Llano de la Soledad, Nuevo León.

In the Cuernavaca house where my grandfather Tomás lived, there was a small house for domestic workers. After Román and Claudia were evicted by the government of Santa María Ahuacatitlán, the house was demolished. I asked that the rubble would not be removed. I knew that if there is an ecological disturbance anywhere, nature restores itself slowly. This is known as ecological succession. I wanted to see the ecological succession in that place. I named that place the biodiversity garden. I left it alone to see how it would restore itself with the native wildlife of northern Cuernavaca. It was immediately inhabited by trees that belong to the species *Bocconia arborea* and by wild tomatoes (*Solanum lycopersicum*). Ecological succession did not stop there. Every year the ecological community changed.

I went to London to visit Jana the Refulgent. We agreed to meet during nighttime at the entrance of St. Paul's Cathedral on Friday the 8th of January 2010. St. Paul's Churchyard, the square that is embellished with a marble statue of Queen Anne of Great Britain, was totally empty. No one was walking there. Only a slim young woman in the middle of the night walked toward the steps at the entrance of the cathedral where I was waiting. She was Jana the Refulgent...

We walked over the Millennium Bridge and from there we went to a pub known as The Anchor - Bankside (51.50732217483694, -0.09283016656927885). Jana the Refulgent was working at that time as a trainee solicitor at the Travers Smith LLP law firm. That night it was snowing. Jana the Refulgent enquired to me:

"Do you remember when we first met you were excited about seeing snow for the first time?"

We started to talk about snow in England and how climate change would make that phenomenon more unusual. It was frequent that during such a conversation, Jana the Refulgent asked my opinion regarding topics that I did not know. I always told her:

"I do not have an opinion regarding that, as I am not a meteorologist, and I do not know anything regarding the weather."

Due to my answer, Jana the Refulgent gave me a last commandment by saying to me:

"Don't ever say that you have no opinion on any topic. Study everything. Learn about everything. This way you can have an educated opinion on any topic."

Jana told me that because she lived her life always learning about all sorts of topics. Such principles are extremely important. I think that is the true philosophy and what Pythagoras meant by philosophy. I can define philosophy following these ideas as a love for all wisdom, not just for part of it. Since then, I have tried to live following that last commandment of Jana the Refulgent. After listening to her wise words, I immediately worshipped her as my spiritual teacher. She told me that I should not do that anymore because I already knew more than she could ever teach me, that I had by then surpassed her. Emilio the Sage told me the same words seven years before. Since then, I always retraced the route of Mariana to remember my discipleship path that I followed by living in accordance with the teachings of Jana, who was gloriously refulgent. (Please see Appendix D to see the route that symbolizes this path.)

Jurisprudence

The Chelsea Physic Garden shows that nature is full of resources that can benefit humankind if there are political and economic policies that promote looking for such products. According to Jana the Refulgent, a good government must improve human knowledge. She did not approve of colonialism, such as the European imperialism that allowed the Chelsea Physic Garden to become a prominent institution. However, she did admire the agendas that prioritized developing science and new technologies promoted by the authorities of the old British Empire. Jana the Refulgent thought that the best possible government would educate people in scientific and technological matters. It would also allocate big budgets to large-scale technological projects. The reason is that she thought that the moral and intellectual development of a civilization is directly proportional to its technological advancements.

Jana the Refulgent did not think that the three humiliations of humanity that Freud cited were truly humiliations. On the contrary, she thought that these great "scientific revolutions," the term used by

Thomas Kuhn (1962) in "The Structure of Scientific Revolutions," were enlightening events for humanity. They were not, as Freud thought, moments when humans were aware of their own irrelevance in this Universe. They were in fact moments when humans were aware of their own greatness as a species because they were able to unravel mysteries of the Universe that were apparently hidden from all animal species that inhabit Earth. If we analyze the so-called "humiliations of humanity" in this way, the Copernican solar system was not a theory that turned Earth into nothing more than an irrelevant planet, as the many that exist. The Copernican solar system was a discovery that turned the human brain into an organ capable of discerning truth beyond the false delusions that the night sky shows to our eyes.

I mean delusions because empirically, it seems as if the Sun would orbit Earth and not the other way round. Indeed, the human mind found the truth behind the optical illusions that we see when we stare at the astronomical objects! The theory of evolution by means of natural selection was not a discovery that turned humankind into nothing more than an unimportant species, like the many that are part of Earth's biodiversity. On the contrary, developing evolutionary theory allowed us to be above all other animal species, as no animal other than humans has been able to be aware of the processes that generated it. The discovery that most of our behaviors are not rational was not a philosophical event that turned human reason into nothing more than a trivial cognitive function, like one more of the many adaptations of the mammalian brain.

Being aware of the philosophical implications of not being totally rational allowed us to accept that our brain not only reasons, but also performs other functions. In this way, we were more able to know all the parts of our mind that are part of us and to learn to accept them. In this way, we fully accepted ourselves. It allowed us to accept not only our rational conscious parts, but also our most primitive emotions and behaviors. Freud originally cited the last humiliation as the discovery of the unconscious mind, but I modified his view to be more aligned with what we currently know about human psychology. The reason is that the word "unconscious" has been applied to all sorts of concepts, from the most scientific ones such as automatic behaviors to the outright superstitious ones such as the so-called "collective unconscious."

According to Jana the Refulgent, social interactions are a strategy game and a jigsaw puzzle. She said that one should not interact in the same way with each person. One must be flexible to be able to adapt a personalized approach with different types of people. This adaptation allows us to obtain the best a person can give us, and the other person

can obtain the best that we can give. It is a mutual exchange of the best we can offer to another person. To be flexible, we must talk about different conversation topics according to the person with whom we are speaking. We must also address such people differently. We must also choose different personalized words and address them differently. We must be also ready to change the kind of personality that we display, including nonverbal communication.

Singing a song to Birgitta the First involved displaying a radically different personality to my everyday persona to be able to adapt myself to sinister Birgitta the First. Therefore, I interacted with her in a suitable way. I morphed into an uncontrollable person that would dramatically change her behavior to generate an unpredictable change in my destiny. That unpredictable change was that I ended up spending the academic year 2008–2009 in Mexico. That allowed me to exorcize sinister Birgitta the First from my life. Indeed, there are great evils in life (such as Birgitta the First) that require great solutions, like spending a year far away on the other side of the Atlantic Ocean.

Jana the Refulgent seldom thought about death. She rarely thought either about her own death or about the death of other people. That was totally different to what Emilio the Sage did to be virtuous, as he always thought about human death. According to her, death is simply the name of the moment when an organism ceases to perform metabolism. Following this definition, a human corpse would not be anything more than an aggregate of molecules that once were able to perform the functions of metabolism, but not anymore. In this way, something that was previously alive transforms itself into something that is not very different to a chair or to a pillow. It becomes a mere set of molecules that is not alive. Hence, it is not something that we should fear.

In the case of my father, who feared the corpse that we found in Cumbres de Monterrey because it might have caused him a supernatural ill, Jana the Refulgent teaches us that there is no reason to fear a corpse more than fearing a chair or a pillow. Maybe my father did not fear the corpse, but instead feared the criminals that killed the man when he was alive. Perhaps he feared the criminals could also potentially kill him. He should not have feared that situation either. The reason is that under the materialistic paradigm of Jana the Refulgent, the fact that we would not see the victims of the criminals would not make us safer from the threat that the criminals may represent to us. In the same way, coincidentally having seen the victims of criminals does not put us at greater risk.

It may be that Birgitta the Second was not anything else but a bogeywoman that Magdalena made up to scare me and control me. Nevertheless, the world is full of bad

people, and in the same way that I met Birgitta the First in 2005, I had to be ready to face the imminent arrival of a similar person, Birgitta the Second, my greatest fear. I decided to get ready to face the coming of Birgitta the Second by using the technique that Jana the Refulgent taught me to obtain top grades in exams. There are several reasons to think doing this was good.

Firstly, the technique of Jana the Refulgent was gradualist. I was of course not ready to face Birgitta the Second in 2009. Nonetheless, by slowly working in a conscientious manner, I could be ready to protect myself from a future attack. Secondly, the technique of Jana the Refulgent was designed to face university examinations, something stressful and nasty. In the same way, Birgitta the Second would be someone stressful and nasty, so Jana's techniques would be suitable to face that evil woman. Thirdly, the technique of Jana the Refulgent guaranteed successfully passing exams. What else would I need to face Birgitta the Second if not a technique that would ensure that my victory over her was guaranteed? It is of course true that university exams are not human opponents but solving them successfully requires as much ingenuity as the ingenuity required to defeat an evil person.

In the "Avesta," the holy book of Zoroastrianism, the Devil appears to mage Zoroaster Spitama to tempt him. The Devil requested that Zoroaster Spitama worship him. However, Zoroaster does not give into temptation. This very same story was told centuries later by Christians in their gospels. The only difference was that in their books, the man that was tempted was not Zoroaster, but Jesus. Due to the Devil's request in this myth, where he asks the hero to worship him, there has always been a Christian idea that there are people who worship the Devil. Be them heretics or witches, the Christians have always created stories about people who worship the Devil. Thus, Asia the Mystic firmly believed there were Devil worshippers. According to her, one of them was Magdalena.

In modern times, there are some churches that do not believe in any Deities, such as LaVey's where they claim to be Satanists, but they in fact do not worship the Devil. They are mere boring groups of hedonist scientistic people who do not believe in any Deities that would have a more exciting life or cult if they truly worshipped demons. They are not worthy of being called Satanists, as Satan was an exciting mythological angel of God YHWH that had plenty of magical powers, not a dull mortal human that simply had a different ideology to most people.

If we define the Devil as the evil that exists, then from my point of view, Devil worship indeed exists. True Devil worship does not entail praying to sculptures of evil angels. It does not either entail being a hedonist or not believing in any Deities. True Devil

worship means stopping to have our own ideas or convictions to conform to the worldview that marketing through mass media sells to us. Worshipping the Devil also means believing what most people believe. To stop worshipping the Devil, we need to think freely and avoid being simple followers of the crowd. I am sure that Asia the Mystic never seriously contemplated what it means to worship the Devil. If she would have done that, she would have realized that it simply means stopping believing in the hegemonic and mediocre ideology of most people that most times leads us to become evil or to our own downfall. Indeed, when people gather to act in large groups without carefully analyzing individually what they think, they very often end up performing vile actions against themselves and against other people. In this way they benefit a few people, but not themselves. The people they benefit are either the leaders of the movement or the rich people who pay for the movement.

Even if Asia the Mystic very likely never thought about this, I think she never fell into the clutches of the Devil. I think this is the case because she always led a very different life from the lives of our other classmates to avoid being spiritually polluted. Asia the Mystic lived a virtuous life as was expected from wealthy Victorian ladies according to the moral standards of that time. She never spoke using profanity; she always practiced charity; and she did not have any sexual behaviors in public, as in Victorian times it was thought that high-class women had to behave as asexual beings while in public. This was living in a radically different way to the rest of my female biology classmates.

I do not mean to imply that upper-class Victorian ethics were superior in any way to our modern ethics. Neither do I want to say that every modern young woman needs to behave as a Victorian gentlelady. What I mean is that humans must think and live according to what they believe is right after carefully thinking about what is right for them, not according to what society and the people in power fancy. The main problem with thinking or behaving like most people is that they might not have the truth. If we want to find our own personal truth, we should look for it individually, not following the likely mistaken crowd. God Apollo commanded sophist Socrates the Elder to live his life looking for truth. That must be the life task of every philosopher.

Asia the Mystic had a very peculiar relationship with the paranormal. She lived all the time performing magic, making miracles, exorcising unclean spirits, and delivering oracles. Nevertheless, as all Christians, she also considered that the practice of magic is a sin. This is the Christian paradox that exists since the time of the Roman Empire. At that time, Jewish religion banned magic. Nonetheless, Jesus, a practicing Jew, behaved the same as any

pagan mage, performing the same type of miracles as them.

According to Asia the Mystic, what makes some magic acceptable but other magic unacceptable is its origin. If some magic comes directly from God YHWH, it is good magic. If it comes from the Devil, it is evil magic. According to Asia the Mystic, the kind of magic practiced by Pryce would be part of what she considered evil magic, as she did not think that spiritualist mediumship was a gift of the Holy Spirit, but a gift of the Devil. One can think that Asia the Mystic was a hypocrite by not wanting there to be violence in the world and at the same time not tolerating all sorts of human spiritual manifestations by rejecting some of them as demonic. In fact, Asia the Mystic was not a hypocrite. She did not want to start a jihad against the infidels. She was ready to peacefully tolerate their practices. What she wanted was to live her own life by not falling into what she thought were the temptations of the Devil. She did not care about the people who surrounded her, only herself.

CHAPTER 23. *DANIO RERIO*

The University of Edinburgh Philosophy Society was an extremely academic society. Every week, expert professors from all over the United Kingdom went to give lectures. Both young students and experienced professors attended them. The guest lecturers were specialists in logic, epistemology, metaphysics, philosophy of science, philosophy of mind, ethics, and aesthetics. After the lectures, we were able to ask questions. Moreover, there were nightly meetings where we went after having previously read a text to discuss it. These texts were written by the great philosophers from past times such as Plato, Aristotle, Epictetus, St. Augustine, St. Thomas Aquinas, Descartes, Leibniz, Locke, Voltaire, Rousseau, Adam Smith, Bentham, Hume, Kant, Hegel, Schopenhauer, Marx, Kierkegaard, Mill, Nietzsche, Freud, Wittgenstein, Heidegger, Popper, Kuhn, Derrida, &c. The seminars were exhilarating because all of us had a lot to say. In these discussions, I learned to substantiate arguments and to debate them with other people. Unlike the lectures of invited guests, the seminars were not attended by professors, only by philosophy students. I made good friends in this group, just as Jana the Refulgent wanted. That is why she told me to join student societies.

I started to work in a laboratory as an intern to be able to graduate with honors. I did my internship in the lab of an arrogant and narcissistic Ivy League graduate that I disliked a lot. At that time, having graduated from a top university made people arrogant, as they thought they were better than people from average universities. This professor does not work at the University of Edinburgh anymore. This narcissistic professor claimed that the most important lesson that a scientist needs to learn is to be humble and be totally obedient to superiors. During all the time that I was working in the lab, the narcissistic professor never worked in the laboratory. He spent all the time inside his office laughing while watching funny videos on social media platforms and clicking the “like” buttons to show he loved them. He also wasted his time by uploading opinions about the selfies that his friends posted on such social media platforms. This practice is known as cyberslacking.

As he was the principal investigator, he of course got all the funding for all the research done in his lab. However, he never worked on investigating. He thought performing lab work by using the hands was grunt work for underdog postdocs, something highly unsuitable for someone as eminent as him. Nevertheless, when research performed in his lab was published,

***Danio rerio* (Buchanan-Hamilton, 1822) (Cypriniformes: Danionidae)**

Illustration made by Aslam Narváez. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 863.**

he was always a coauthor, as if he had participated in any way in such research. As a matter of fact, his participation was always null. Good principal investigators should not only be engaged in bureaucratic matters. Such scientists should also be engaged in using their hands in lab projects. Research should not be performed exclusively by postdocs' hands. Maybe, a principal investigator should not be engaged in research on a full-time basis, but lab division of labor should not include principal investigators that never perform any research directly.

Before writing about my work in this laboratory or in any other laboratory, it is suitable to explain what a transcription factor is, as I always worked with them. By transcription factor, I mean a protein that is involved in regulating the process in which a cell copies the information contained in one of its genes to a molecule of ribonucleic acid (RNA). Some RNA molecules are ready to be used by the cell as part of the cell's structure or as part of molecular machines such as ribosomal RNA (rRNA) or as the RNA used for the RNA interference pathway (siRNA & miRNA). Another type of RNA produced during transcription is known as messenger RNA (mRNA) because it is used to send the genetic information to the ribosomes, where the sequence of nucleotides of the mRNA is translated as a sequence of amino acids.

My supervisor who worked for the narcissistic professor was a Muslim lady who always wore a scarf wrapped around her head. Her work involved researching the function of a protein known as octamer-binding transcription factor 4 (Oct4). Oct4 is one of the proteins that does not allow embryonic stem cells to differentiate into other types of cells. Oct4 is one of the POU domain, class 5 proteins (PouV). "POU" is an acronym that comes from the first letter of the names of three transcription factors that belong to this family. These transcription factors are Pit1, Oct1, and Unc-86. Pit1 stands for pituitary-specific positive transcription factor 1. Oct1 stands for octamer-binding transcription factor 1. Unc-86 stands for uncoordinated-86.

After this etymological digression, I shall now continue writing about Oct4, the protein that my supervisor studied. The gene that codes for Oct4 is known as *POU5F1*. Its name means *POU class 5 homeobox 1*. It was known that there are orthologs of *POU5F1* that are expressed in the inner cell mass that is found inside the embryos of different vertebrate lineages. The protein products of these genes have a conserved function in these lineages. A former postdoc of the narcissistic, social media-addicted professor substituted mammalian Oct4 for other orthologous PouV proteins from other groups of vertebrates to find out if they could carry out the same function. These vertebrates

were the zebrafish (*Danio rerio*), the axolotl (*Ambystoma mexicanum*), and the African clawed frog (*Xenopus laevis*). The result was that the orthologous proteins of the axolotl and of the frog were able to carry out the same function. The orthologous protein of the zebrafish was not.

The narcissistic professor wanted to know if this compatibility appeared with the tetrapods; or if it existed in the most basal vertebrates but was lost later in the teleosts. To know this, the same study was to be done in a more ancient bony fish lineage than the clade where zebrafish belongs. My job was to repeat what the former postdoc did, but this time with sturgeon octamer-binding transcription factor 4 (stOct4), the orthologous protein of Oct4 in the Atlantic sturgeon (*Acipenser oxyrinchus*). The deoxyribonucleic acid (DNA) sequence of the gene *stOct4* was synthesized and I had to amplify it in plasmids using a culture of the bacterium *Escherichia coli*. After this, I cut the plasmids using the restriction endonuclease NotI. This enzyme was originally obtained from the bacterium *Nocardia otitidiscaviarum*. The final sequence that would be transfected was introduced in an expression vector known as pCAG used in mammalian cells. "pCAG" means "CAG promoter." "CAG" is an acronym that comes from the names of the DNA sequences that constitute this vector. These DNA sequences are the cytomegalovirus enhancer element, the β-actin promoter, and the rabbit (*Oryctolagus cuniculus*) β-globin splice acceptor.

By using the gene knockout technique, my supervisor would remove *POU5F1* from mouse (*Mus musculus*) embryonic stem cells. Then she would attempt to rescue them with the vector pCAG that contained the *stOct4* that I prepared.

On some days, I had to spend all day in the laboratory until the evening. Other days, I had to arrive in the early morning to start my job. The labs were open 24 hours a day and there were always people working there. When I was given the notebook that would be my lab diary, I swore an oath that I would keep secret everything that I would do in the lab. I am of course not breaking my oath by writing this down here, as it is already an old research topic.

I frequently traveled outside of the city of Edinburgh to nearby Scottish villages and the countryside. I always went out there with my significant other, Magdalena. I mostly went out with her to watch birds with my Swarovski EL 8x32 binoculars. We enjoyed a lot of outdoor dates that involved hiking in nature. Magdalena and I always drank infusions when we spent the afternoons together. We always drank them at the same time of the day. It was always at 4:00 PM. Magdalena always drank infusions of *Passiflora incarnata* and *Hibiscus sabdariffa*. Magdalena's big breasts were soft and smooth. She loved that I caressed

her breasts and her nipples. As she described herself, she was neither an anorexic skinny woman nor a fat woman. Her body was healthy and voluptuous. Her waist was slimmer than her hips. Her stomach was flat, and I loved to penetrate her innie navel with my finger to caress it while I was hugging her around the waist or when we were chatting together. I loved to hold her waist while I was kissing her neck. That always made her blush and made her laugh out loud while she was hugging me. Her long legs felt toned and soft when I caressed them. The skin of her whole body was milky.

Magdalena was strange because unlike other women, she did not like to have sex while both of us were facing each other. She only liked to have sex while I was standing behind her. Fortunately, sex was always vaginal, never anal. Unfortunately, this position did not allow me to see her face while having sex with her. That was a pity because the face of a lovely woman always turns me on. Magdalena told me that she had an intrauterine device inside her uterus. One day, I bought a bouquet of flowers that belonged to a species of orchid that belongs to the genus *Cattleya*. I bought it to give to Magdalena. This gift was to show her how much I admired the beauty of her face and her body.

My supervisor's PhD graduation happened while I was her student. PhD is an abbreviation of the Latin words "philosophiae doctor." That is "doctor of philosophy." My supervisor was a scientist, not what we would now refer to as a philosopher. Yet, we should not forget that before William Whewell coined the word "scientist," the term used to refer to exactly that type of person was "natural philosopher." This was because the pre-Socratics were both what we would now refer to as the first "philosophers" and as the first "scientists" of Western culture. So, the term "natural philosopher" was used until Whewell created a neologism to substitute it.

To celebrate her graduation, my supervisor went with all her research group to a restaurant known as the Newsroom Bar & Eatery. We all sat at the same table. I spoke all the time with all the persons at the table. The narcissist professor ended up hating me because according to him, people paid more attention to me than to him. He told me: "As the principal investigator, I should have been the life and the soul of the party, not you!" He threatened me by saying that he would take revenge on me because of my charismatic personality by decreasing my grades. In that way, I would learn not to attract more attention than him at parties. He said my grades would be totally independent of my performance in the laboratory. In the sciences, when one is about to start a career, getting low grades is awful, as at the beginning of a scientist's career, the quality of a researcher is

measured according to the grades that student gets.

Years later, the quality of a researcher is measured according to the impact factor of the publications which the postdoc writes. In 2007 or before, I would have been very worried about getting low grades, but after having spoken to Ian Wilmut, the genius who made Dolly (6LLS) the sheep (*Ovis aries*), I knew that there was nothing more important in life than feeling well. The quality of the scientific institution where one works is utterly unimportant. Such was the astute advice that the old wise man told me. High-level science is stressful, and one needs to sacrifice a lot for it. Therefore, I decided to apply for a master's degree to a less prestigious university, the Uppsala Universitet of Sweden. I did not want to be humiliated by the narcissist guy. If I wanted to graduate with honors, I needed to keep working with him. Nonetheless, if I only wanted an ordinary undergraduate bachelor's degree, I did not need to spend more time suffering the humiliations of that man. As I already fulfilled all the requirements to get an ordinary undergraduate bachelor's degree, I decided to resign and stop working in this research group. So finally, I did not give the narcissistic dude the satisfaction of grading me unfairly. I did not have time to play his mind games. I would still become a Bachelor of Science graduate.

The day I decided to leave Edinburgh; Magdalena was very upset. I asked her why she felt bad. She told me that while performing a tarot reading, she knew that something bad was about to happen. She was right and I confessed to her that I would leave Edinburgh. Magdalena said to me: "Can you see that I always know what is going to happen because I always think in the worst possible outcome?" Magdalena was furious with me because I wanted to leave the United Kingdom. Her plan was that we would both apply for United Kingdom citizenship, that we would marry, and that we would live together. At that time, I did not like Magdalena's personality anymore. She was a bit mentally sick. Even though my mother told me that Magdalena was Birgitta the Second, she never was her. By breaking up with her, I did not allow her to become someone who would ruin my life. However, I did allow us to live happy moments together.

This reminds me of what a holy angel told me in my dreams in January 1999. She told me that I should take whatever would be useful for me from the teachings of the one who is a sage. This is true regarding all people, not just regarding the sages. We always need to take whatever is good for us from other people and to avoid what is noxious for us. That is why I lived a beautiful relationship with Magdalena, but I did not allow her mental illness to harm my life by marrying her. The fact that

Magdalena did not become Birgitta the Second did not mean that there would not be another woman in a future time that eventually could become the genuine Birgitta the Second that I feared so much.

Before leaving Edinburgh, I donated three objects to the University of Edinburgh Philosophy Society. I granted a wooden staff with a carved western barn owl (*Tyto alba*) on top of it, an archeological artifact that I found in Thetford Forest, England, and a textbook titled "Evolution" by Douglas Futuyma (third edition, 2005). This was a textbook that Professor Colegrave requested me to buy to study and revise for his subject. This topic might not seem related to modern philosophy, but Philosopher Daniel Dennett in fact thought that evolution is the most important idea in philosophy. Dennett (1995) stated this in his book titled "Darwin's Dangerous Idea: evolution and the meanings of life." The three objects and my grant offer letter were displayed in the library of the Philosophy Society.

Even if I agree with Dennett that the idea of evolution by means of natural selection is important, I do not endorse his view that it is the best idea that humankind has ever had. I think the best idea ever is mathematical proof as epitomized by Euclid's "Elements." The reason is that, as the most blessed Pythagoras thought, everything can be modeled by mathematics. What would then be more important for our civilization than the basis of mathematics? Evolution through natural selection can indeed be seen as a unification between the natural sciences and the disciplines that study the meaning and purpose of life. That is how Dennett understood it. However, even before Charles Darwin, natural science and the meaning of life were parts of our everyday life within this Universe. Even with such implications, the limit of the theory of evolution through natural selection is still the physical Universe that we inhabit. It cannot be applied to what is beyond the realm of energy, matter, space, and time. The Universe is finite, mathematics is not. Evolution cannot reach the infinite, but mathematical proof does it all the time. So, mathematical proof is not only useful to understand our finite Universe but also to understand such ideas that involve magnitudes that not even this Universe can contain. Therefore, mathematical proof is a more important idea than evolution through natural selection.

The female Y2K fashion trend that entailed showing off the bare tummy and belly button in public became more unusual throughout the years. At the beginning of the 2000s, many girls and young women wore that fashion style. They bared all their bellies and some of them even dressed like that no matter the temperature, the place, or the hour of the day where they would be. Some years later, the number of ladies that kept dressing like that decreased. The ones

that still dressed like that showed off less tummy skin. The number of young ladies that were dressed like that on a full-time basis also decreased. At some point, such outfits ended up restricted only to warm days or to beach holidays in tropical or subtropical places. During winter 2010, there was only one woman in the biology buildings of the University of Edinburgh who still wore crops tops and bras that allowed her to show off all her bare midriff, her navel, and her sleeveless arms every day. Like the ladies of the early 2000s, she dressed like this during every season of the year. She was a postdoc from Professor Schirmer's laboratory named Nadia. The skin of her tummy was tanned, and her belly button was an innie.

Now I shall explain why fashion changed. Since the second half of the 2000s, obesity increased in industrialized countries. This was mainly due to new technologies that adversely impact human health, such as social media. In the 2010s, obesity became a significant public health issue. Because of this, there was a lower number of girls and women with fit, healthy bodies. The result of this was that female fashion became more modest because a lot of skin was covered by clothing. This was because most people consider what is healthy to be beautiful, and what is pathological to be shameful. Thus, they hide obesity with clothing. In the 2010s, not all women suffered from obesity—some of them, such as Jana the Refulgent, always kept being slender and fit. The Y2K female fashion of the 2000s was remembered in later decades as oversexualized. Even if this exceedingly erotic fashion disappeared from real life, it was kept alive by comic illustrators, mangakas, and video game designers in their fictitious universes.

In February 2010, I planned to travel, and Jana the Refulgent blessed me before I would embark on a journey. I was ready to go to Greece and Italy. I decided to perform this pilgrimage because of my daily study of the "Dialogues of Plato" and due to philosophy, itself. Furthermore, I wanted to imitate Georges-Louis Leclerc, Count of Buffon, and other rich kids that lived in the 17th and the 18th centuries. These guys traveled in Europe following an educational itinerary that was known as the Grand Tour. It was an itinerary that put a special emphasis on ancient Classical and Renaissance culture. During the 17th and 18th centuries, it was thought that the education of a gentleman would not be complete if the guy did not make a Grand Tour to Italy and, if possible, to Greece as well, after finishing his undergraduate university studies. The Grand Tour was a didactic experience to learn about art, architecture, and archeology.

I first learned about the Grand Tour in an essay written by Sandra Knapp. She is the professor who introduced Tiina Särkinen to the study of the Solanaceae. Her essay on

the Count of Buffon was published in an anthology of texts titled "The Great Naturalists" (2007). I especially liked this essay because it had a fabulous illustration from the book by Pierre Denys de Montfort that is titled "Histoire Naturelle Générale et Particulière des Mollusques" (volume 2, 1801). The illustration showed a kraken destroying a ship in Angola. I have included a modern version of this illustration in the painting of the polar bear (*Ursus maritimus*) that I commissioned from Javier Montesinos Medrano. You can see it in this book. But my kraken is not in Angola, it is in Kiribati! (**Page 83.**)

After leaving the bedroom above the bookshop where I was living, I spent my last days in Edinburgh in an old hotel known as The Three Sisters. Nowadays it is known as STAY Central Hotel. From that place, I started my Grand Tour or pilgrimage (55.94814221509062, -3.190000060327707). When I left the city of Edinburgh on Thursday the 25th of February 2010, I was ill. I had a sore throat. I was feeling malaise. I had a fever. I had greenish phlegm. I was coughing. I had nasal and nasopharyngeal congestion. I flew by plane to London and later that day from there to Athens. The next morning when I woke up in Athens, I was totally healed, not suffering any symptoms of illness.

The way I was healed was bizarre... It was produced by a spontaneous mystical experience that happened to me that I did not plan. This mystical experience occurred during the nighttime inside the room in the hotel where I was staying in Athens. These events occurred during hypnagogia. This means that this happens when one is not fully awake but not fully asleep. I know this because my experiences happened right in the room where I was lying on the bed, not inside a dream. I saw how a man visited me inside my bedroom. He just appeared in front of the door and did not need to open the door to enter. This man was not a normal man. He was luminous, as if he were entirely made of white fire. He looked exactly like the fire that is produced when one ignites magnesium ribbon with a Bunsen burner. As the room looked just as it was, I believed I was fully awake.

The mysterious shining man was so luminous that when he appeared, all the room looked as if it were daytime. He did not just visit me once. He visited me several times during the early morning. I was terrified every time he appeared. This good angel totally healed me.

I visited the archeological sites of Athens. I left the hotel by walking to visit them. The first one that I visited just a few hours after the angel healed me was the Stoa Poikile. In this place, Zeno of Citium was a philosophy teacher. His disciples were known as the Stoics after this place. Stoicism deeply influenced my teacher, Emilio the Sage. Then I visited the Ancient Agora of Athens. This was a very important place because

here Anaxagoras hosted his public shows of scientific experiments. Anaxagoras was the father of Athenian philosophy. Also in the Agora, Socrates the Elder taught his disciples. The Cynics also preached to the townsfolk here.

Then I went up the stairs of the Sacred Rock. In that place, there is a famous cave where the democratically chosen politicians that ruled Athens swore an oath in front of the citizens and promised to follow the laws. The Sacred Rock was also climbed by Diogenes of Sinope to fulfill the challenge that his philosophy master Antisthenes set for him to choose him as his successor. On top of the Sacred Rock is the Acropolis. Its most famous building is the Parthenon, the temple of Goddess Athena. There is another famous temple known as the Erechtheion. It was built to honor the snake king that was born from Gaia. In the park where the Sacred Rock is found, one can still find wild owls (*Athene noctua*). I saw one! This is the holy animal of the Goddess. That is why it is the symbol of wisdom. I also went to Epidaurus, an archeological site that is not in Athens. This place is famous because it is said that Asclepius lived there. He was a great physician and a holy man who lived in ancient times.

As a result of this, in ancient times, there was a grand hospital in Epidaurus. In art, Asclepius is always depicted holding a staff with a snake (*Zamenis longissimus*) wrapped around it. This staff and its serpent are the modern symbol of medicine. In Epidaurus, I visited the ruins of the hospital and temple that was built to honor the great medical doctor. I also went to Mycenae. That was the most important city of the Achaeans at the time of the Homeric heroes. The king of kings of the Achaeans once lived there. In the old legends of the Olympian religion, it was said that the Mycenaean civilization was the one that invaded Troy. The greatest heroes of Greek mythology lived during such times. I also visited the ruins of the Oracle of Delphi on Mount Parnassus. According to the Olympian religion this was the center of the world. Here, in ancient times, the Pythia prophesized by inhaling holy vapors.

In Greece, I visited as many archeological museums as I could. The most beautiful artworks of these museums were the objects made of gold from Mycenaean times, and the statues of Goddess Aphrodite. During my time in Greece, I also hiked up to the highest part of Mount Olympus that one can reach without rock climbing equipment. The holy mountain has beautiful streams within ravines. *Pinus* forests cover its mountainsides. In the alpine tundra, the depth of the snow in the ground reached my knees. In Olympian religion, Mount Olympus was the holiest place. The following Deities lived there: Goddess Hestia, God Zeus, Goddess Hera, God Poseidon, Goddess Aphrodite, God Ares, Goddess Demeter, God Apollo, Goddess

Artemis, God Hermes, Goddess Athena, and God Hephaestus.

In Italy, I visited Pompeii, an almost intact archeological city where one can imagine how life was during Roman antiquity—it is almost intact thanks to the ash that was produced by an eruption of Mount Vesuvius. The eruption stopped time so one can have a peek at the ancient past. I went by bus to the top of the Vesuvius, to its crater. It was scary because when I was there, it still produced tiny volcanic earthquakes, and it still had fumaroles which produced gases that came from beneath the Earth! In Rome, the Eternal City, I went to the Vatican, the Holy See of the Catholic Church. There I visited the museums and St. Peter's Basilica. I also went to see Pope Benedict XVI during his weekly Sunday Angelus speech. One of my favorite artworks in the Vatican Museums was the "Colonna Venus," a copy of the sculpture titled "Aphrodite of Cnidus" that was originally made by Praxiteles. I also loved the mural paintings of the Sistine Chapel by Michelangelo Buonarroti (1541) and the mural painting "Scuola di Atene" by Raphael (1511).

I then bought a bouquet of inflorescences that belonged to the species *Acacia dealbata* as a mortuary offering to the memory of St. Paul, the apostle to the Gentiles, the most prolific writer of the biblical "New Testament." I placed the bouquet on top of his tomb. Every 8th of March, International Women's Day, some Italian men purchase bouquets of *Acacia dealbata* to give to the ladies that they know. I visited the tomb of the apostle on the 8th of March; that is why the inflorescences that I bought in the street in front of the basilica belonged to this species. When I bought them, I did not know the meaning of such Australian inflorescences for Italian people. Botanists refer to the inflorescences of *Acacia dealbata* as its globose heads. In the Trevi Fountain, I requested a miracle to God Oceanus, Goddess Abundantia, and Goddess Hygieia, whose sculptures are found there. To request miracles from them, tourists throw a 1 EUR coin to the fountain. These coins are thrown by using the right hand over the left shoulder. This is done by facing the opposite direction of the statues of the Deities. My wish was fulfilled...

Also, in Rome, I visited the Catacomb of St. Callixtus. It is famous because the corpses of several Christian martyrs were buried there. Catholic Christians love the dead remains of their saints, and I shall explain why. In ancient Egypt, some people believed that the supposed remains of Osiris the Khenti-Amentiu were sacred and were stored as relics. Since then, people have kept relics of holy people. But miraculous gifts were not routinely obtained from dead body parts until ancient Greek times, when, for example, the followers of prophet Orpheus claimed that the dead head of their spiritual

master could be used to perform necromancy. This was not a Jewish belief practiced by Jesus or his apostles; they never prayed to human bones or worshipped them so they could grant wishes. Yet, Catholic Christians adopted this pagan mystery. Hence, they venerate the relics of their martyrs so they can grant wishes.

I visited the Parco Archeologico del Colosseo. The most iconic building of this archeological site is obviously the world-famous Colosseum, the amphitheater where in antiquity gladiators fought, beasts fought, and battles were reenacted. Close to that site are the ruins of the Imperial Palace of Rome. It is said that once, in what is now the Parco Archeologico del Colosseo, Hercules defeated an evil, fire-throwing giant. It is also said that in that very same place, a wild she-wolf (*Canis lupus*) nursed Remus and his brother Romulus, the founder of Rome. In that place too, the Roman emperors ruled their mighty empire. I also visited the Pantheon, the famous ancient pagan temple that was preserved in all its glory because it was later rebranded as a Catholic church.

In Bologna, I visited the natural history cabinet of Ulisse Aldrovandi. It is a good example of a Renaissance natural history cabinet that still exists today. Later natural history museums evolved from these cabinets of curiosities. My favorite objects in this wunderkammer were the rabbit fish taxidermy (*Chimaera monstrosa*), and the taxidermy mounts of the lizards that belong to the species *Draco volans*. Something freakish in this museum was a toad taxidermy (*Bufo bufo*) that was a fake rogue taxidermy hoax. It was modified by an artist by placing a long tail behind its pelvic girdle. The artist also added to it the sharp teeth of a mammal (*Mustela erminea*) so it would look like a mythological monster.

I then went to the oldest botanical garden, the Orto Botanico di Padova, and visited the Basilica of St. Anthony of Padua, the patron saint of lovers, as that Catholic church is next to the botanical garden. The Vitruvian shape of the old garden somewhat reminds me of the concentric circles of an anatomical theater, a suitable place to teach medical students! We should not forget that botany and materia medica were subjects taught to future physicians. I next went to Florence. Florence has some of the most awe-inspiring Renaissance art that has ever been created. After all, European Renaissance was born in what is now Italy. The Renaissance was the time when high culture and literature was again studied in Europe. Florence is so beautiful that 19th-century intellectual Stendhal was mad about it. Every person who likes art would be equally excited after seeing all the paintings, sculptures, and architecture! Stendhal (1817) wrote about how Florentine art amazed him in his book “Rome, Naples et Florence.” In Florence, I visited the Palazzo Vecchio, an old, imposing palace. I also

went to the Galleria degli Uffizi, a famous art museum. The artworks that I loved the most in the Uffizi were the "Venere di Urbino" by Titian (1538) and the "Nascita di Venere" by Botticelli.

In Verona, I was briefly living in the house of Sara Romani, a young woman that I met in Saffron Walden, England when I was studying English. In Florence, there is a metallic sculpture of a wild boar (*Sus scrofa*) that is known as the Porcellino. Tourists touch its nose for good luck. According to Sara Romani, the same happens in the house of Juliet, the character in the play by William Shakespeare. The difference is that people touch the right breast of the sculpture of Juliet to get good luck instead of her nose. I went to visit Juliet's house in Verona. She is highly worshipped there. People from all over the world send letters to her to tell her anecdotes. I also went to Venice. During the Middle Ages, it was a cosmopolitan port and the link between the civilizations of the East and the Western European civilization... I loved visiting the Palazzo Ducale, the former palace of the dukes of Venice. I also liked sightseeing the canals on a private gondola ride.

Then, I visited St. Mark's Basilica. This cathedral is cited by Stephen Jay Gould and Richard Lewontin (1979) in their paper "The spandrels of San Marco and the Panglossian paradigm" that was published in "Proceedings of the Royal Society B: Biological Sciences" 205 (1161): 581–598. According to Sara Romani, St. Mark, the man who wrote the oldest known biography of Jesus, is not buried there. She claimed that all Catholic relics are fake. Thus, it is useless to perform pilgrimages to visit the tombs of the saints. Strangely, she was a Catholic. She even dressed up as someone that looked like a nun in white dress with an enormous candle when she was a kid. She wore this fancy dress for her First Holy Communion. A large portrait of her wearing this was displayed in her house. I always saw that portrait when I went upstairs because I was sleeping in Sara Romani's bed. Sara Romani's family were farmers that sold honey made by honeybees (*Apis mellifera*).

My Grand Tour was a spiritual pilgrimage. Nevertheless, not all the places that I visited were associated with the Abrahamic religions. Many sites were pagan. In fact, Western spirituality is a mixture of Abrahamic and pagan elements. By pagan I do not mean new religious movements such as Wicca or Kemetism. I mean the original ancient sources that created the ideas that can be now read in the Jewish "Tanakh," in the Christian "New Testament," and in the Muslim "Qur'an." Many traditions, myths, and ideology found in Abrahamic religions and in Western philosophy before the Renaissance originated in the ancient pagan civilizations of the Mediterranean Basin, the Middle East, and the Eurasian Steppe. This is the archeological paganism of the

abandoned temples that have been eroded by natural phenomena after many centuries. Nonetheless, it is still alive in our culture and our ideas.

Therefore, many of these ancient holy places generated our modern spirituality, meaning they ought to be holy for our modern civilization. Unlike Neopagan religions that are strikingly different to Judaism, Christianity, and Islam, the ancient pagan mysteries were very similar to the modern Abrahamic religions. The Abrahamic teachings come from them. Since I finished my Grand Tour, when I left the Venice Marco Polo Airport by plane, I always followed the route of Mariana to remember my Grand Tour, and all subsequent pilgrimages. Now I have finished my account on how my Grand Tour or pilgrimage happened. (Please see Appendix D to see the route that symbolizes spiritual pilgrimage.)

After my Grand Tour, I lived with an entomologist that researched lepidopterans. His name is Cees Gielis. He lives in Lexmond, South Holland, Netherlands. He taught me how to perform fieldwork and how to mount specimens of microlepidoptera. Cees has an impressive private natural history cabinet in his house. He keeps lots of pinned insects, herborized plants, a long-eared owl (*Asio otus*) taxidermy, and even a real human skull! After learning a lot from the great Cees, I visited an enormous park in South Holland that is known as Keukenhof. This park is full of different domestic varieties of plants that belong to the genus *Tulipa*. It is awesome to see the result of artificial selection in such plants. The diversity of morphologies that horticulturalists have been able to breed is incredible! Artificial selection can obviously generate as much diversity as the adaptative radiations of wild organisms in nature. By looking at the tulips of Keukenhof, one can notice why artificial selection inspired Darwin to postulate his theory of evolution by means of natural selection.

During spring 2010, I organized several expeditions with my parents to collect lepidopterans in Mexico. I was then able to practice the skills that Cees taught me. He taught me that to mount them correctly, a microscope was required. Thus, since spring 2010, I have traveled with a portable stereo microscope. In my Chiapas expedition, I saw a large harpy eagle (*Harpia harpyja*) flying over the Usumacinta River. It flew from the Parque Nacional Sierra del Lacandón, Guatemala, toward the tropical rainforest. Unfortunately, during the Chiapas expedition there were too many trichopterans. That was not very good because they resemble a lot the basal species of lepidopterans. However, this experience taught me the differences between lepidopterans and trichopterans. While I was in Chiapas, I saw one of the last Mexican persons whose eye suffered from

ocular onchocerciasis, before this illness was eradicated from Mexico. This disease is caused by a nematode worm known as *Onchocerca volvulus*. People are infected after being bitten by a vector that carries the disease. The most common vector in Mexico was an insect known as *Simulium ochraceum*.

As part of one of my expeditions, I once went with my parents to Huautla de Jiménez, Oaxaca. We hired local guides so they could find a suitable collection locality for us. Their usual everyday job was to collect wild psilocybin mushrooms that belong to the genus *Psilocybe*. They sold these hallucinogenic mushrooms to hippie tourists. Therefore, they knew quite well the mountain forests that surround the town. It was María Sabina who started recreational drug tourism in that town during the 20th century. The local guides went with us to a spring in the mountains. It was the best place to look for microlepidoptera, because it had plenty of different native plant species, the hosts of the insects. The guides were a man and his wife. During all that time, they were quite scared. The reason was that it was night, and they claimed that that place was haunted by chaneques. An ohuican chaneque is a ghostly person that enjoys scaring normal people. No chaneque appeared during that night. We saw only insects, but that was good because that was what I was looking for.

Nevertheless, the local guides were frightened. The guides said that the chaneques can cause illnesses in their victims. That is why they were so afraid of them. This is very similar to the folk legend that my grandfather Tomás believed, regarding the mal aire from the jinxed graveyard. This graveyard is now a public square that is found west of the church of Atzitzimititlán, Tlaxcala. These beliefs are similar because in both stories, ghosts were able to cause illnesses in unsuspecting, normal people.

In the mountains that surround Huautla de Jiménez, we saw a jaguarundi (*Herpailurus yagouaroundi*), a small wild feline.

In 2010, we also made an expedition to Cozumel Island. In this locality, we collected moths in a land lot covered by native plants not far from Punta Sur. The ecosystem was a tropical deciduous forest, not a mangrove. Microlepidoptera do not like mangroves. In that land lot, there were two policemen whose mission was protecting the private land lot. Another police officer who was their friend told us to go to collect moths there. The policemen who were protecting the land lot thanked us a lot for collecting there with them. Their colleague sent us there because his friends needed a heterosexual woman to protect them, and my mother was a woman and heterosexual. All this may seem very strange, but I will now explain what was going on.

According to the cops, that place was haunted by Xtabay, a seductive young maiden who was either a divine or a demonic spirit. She appears out of nothing and disappears equally mysteriously as if she were a ghost. She kills the men that feel sexually attracted to her. She willfully asks them to follow her. As my mother was traveling with my father and I, they felt safe during the night, because the magic of that "gal," as they referred to her, does not have any power over heterosexual women, such as my mother. The respective female lovers of the police officers did not agree to go with them because they were afraid of the demonic damsel of the night. Plenty of Mexicans fear night and its demons...

Now I will share something interesting that I saw on our expedition to the mountains that surround Huatusco, Veracruz. During the night, I was able to see at roughly 4 m away from me an owl that belonged to the species *Strix sartorii*. The sounds that it was making scared my mother because she remembered my grandmother Lorenza's tale that taught how owls foretell the death of humans when they vocalize close to them. Nothing happened to us.

My graduation happened on Saturday the 26th of June 2010. That day, I was awarded the degree of Bachelor of Science in Biology by the University of Edinburgh. I fulfilled my dream of studying my undergraduate degree in the United Kingdom in a prestigious university. It was all thanks to the teachings of Jana the Refulgent, my beautiful Empyrean damsel that I loved so dearly...

I went to London to see Jana the Refulgent in person. I met her on Monday the 23rd of August 2010. That was the day before I took an airplane to go to Sweden for the first time, as I would start my master's degree in biotechnology at Uppsala Universitet. Jana the Refulgent had already finished her trainee program and now she could become a professional solicitor.

The next day, she would also leave the United Kingdom and would not live there anymore, the same as me. Before meeting her, when I made the appointment with her, I told her that I wanted to give her a going away gift to thank her for all her help, which allowed me to finish my undergraduate bachelor's degree. She replied:

"As to gifts, please don't spend your money on that! You will need it in Sweden! The biggest gift is that you are such a nice person."

We met at the entrance of St. Paul's Cathedral. On that day, we met during the daytime. Jana the Refulgent congratulated me on becoming a biologist and for all my efforts to achieve that at university. We went to the Starbucks coffeehouse that is to the north of the cathedral. Jana the Refulgent bought a cup of hot chocolate for me so I would have something to drink while she drank a cup of coffee (*Coffea*

arabica), as she always did so many times before that day. I do not like coffee because it tastes bitter. I knew it did not have a nice taste since I was ten years old. At that time, Sara Villagrán, my schoolteacher during sixth grade at elementary school, compulsorily made us drink coffee. That is why I always asked Jana the Refulgent to buy a cup of chocolate for me instead.

Chocolate is a beverage that is a symbol of Jana the Refulgent. She is remembered by drinking it. Chocolate comes from the seeds of cocoa (*Theobroma cacao*) and from milk that comes from cows (*Bos taurus* or *Bos indicus*). Jana the Refulgent asked me what I had done that morning. I told her that I had been sightseeing in Buckingham Palace, the place where Queen Elizabeth II lived. Jana the Refulgent confessed that during all the time that she lived in London, she never visited the palace. I told her about all the marvels that I saw during my Grand Tour and how that allowed me to be closer to divinity. Being close to Jana the Refulgent made me feel also close to divinity because she was so wise, so beautiful, and so sexually attractive that it was as if I were close to a Goddess.

We were sitting at a table that was outdoors in the very busy Paternoster Square. As we were outdoors, a pigeon (*Columba livia*) landed over a chair that we were not using. Jana the Refulgent scared the pigeon so it would not bother us. She did not scare it with her hand. Jana the Refulgent scared it with her left foot while she was sitting. To do this, she lifted her leg as high as the top rail of the chair where the pigeon was perched. The pigeon flew away. Nonetheless, that was not the main aim of Jana the Refulgent... Jana the Refulgent was wearing a miniskirt, so by lifting her leg, she showed me her panties and her extremely gorgeous and shapely leg. She did not lift her leg quickly and briefly. She did it slowly and seductively. As we were of course in a very busy place, plenty of people saw Jana the Refulgent lifting her sexy leg and publicly displaying her panties. This was because Jana the Refulgent was very sexually uninhibited and quite an exhibitionist. Her behavior made me feel sexually aroused. I told Jana the Refulgent how important she was to me and that I was in love with her.

After our goodbye hug, I kissed her right hand, and she passionately kissed my mouth. We went inside the Borough High Street entrance of the London Bridge station of the underground subway rapid transit (51.50512621695044, -0.08950284656476071). We took different paths. She went to the Jubilee Line, and I went to the Northern Line. That is how I said goodbye to the person that I loved the most in all my life. She was the young woman who was able to see the stars and, beyond them, Paradise; the place where everything is eternal and beautiful. She was the daughter of the holy angels. She was a heavenly gemstone...

I lived in Sweden during the reign of King Carl XVI. The university president of Uppsala Universitet was Anders Hallberg, who greeted all new students by shaking the hands of each one of us. The university seal is an allegory of the power of God YHWH (Allah) over this Universe. The seal has two spheres. The higher one is radiant, and it has written on it the tetragrammaton (the four Hebrew letters of the name of God YHWH). It is the Platonic divine sphere. The lower sphere is non-luminous, and it is the natural physical universe. The seal has written on it a motto. It is: "gratiae veritas naturae."

Uppsala is a small city. It is on the banks of the Fyris River. It has a grand castle that is a museum. Its streets are modern and lovely. The commercial area surrounds a square known as Stora Torget. In Uppsala's suburbs, there are small residential houses, except in the eastern part of the city, where there is a small industrial park. Almost all the buildings of the city are small, except its grandiose cathedral, the castle, and the buildings of the university. The cathedral and the castle were built on top of a very long ridge known as Mons Domini. This ridge is found on the west side of Fyris River. In the south of the city, there is a small lake that was made by the Fyris River. This lake is the Övre Föret. After this small lake, the Fyris River finally empties into the great Lake Mälaren. When I lived in Uppsala, the women who belonged to the Gitano ethnicity still wore folk costumes all the time. In the north of the city, there is an archeological site where there are several tombs of Viking pagan kings. In the west of Uppsala, there is also a monumental tomb of another pagan king. It is known as Hågahögen. I do not know why it is the only monumental tomb there. I have always been intrigued about why that king did not want to be buried close to other kings.

The most charismatic wild animals of Uppsala are the European eel (*Anguilla anguilla*), the asp (*Leuciscus aspius*), the northern pike (*Esox lucius*), the zander (*Sander lucioperca*), the red fox (*Vulpes vulpes*), the European badger (*Meles meles*), the roe deer (*Capreolus capreolus*), the greylag goose (*Anser anser*), the mute swan (*Cygnus olor*), the western marsh harrier (*Circus aeruginosus*), the rough-legged hawk (*Buteo lagopus*), and the common raven (*Corvus corax*).

Uppsala is surrounded by taigas. These are *Picea* and *Pinus* forests that look very different in each season. In general, they always have plenty of stagnant water (H_2O), but there is always more stagnant water during spring due to snow melting. In winter, they are fully covered by an enormous amount of snow. During summer months, the number of mosquitoes (*Aedes sticticus*) that inhabit them is totally awful. In the United Kingdom, I never saw as many mosquitoes. In Mexico, I had only seen such numbers in Tres Palos, Guerrero;

in Xpujil, Campeche; in Atlanga Reservoir, Tlaxcala; and in a botanical garden known as Jardín Botánico Dr. Alfredo Barrera Marín, Quintana Roo. However, in Mexico, the places with large population densities of mosquitoes are small and isolated. In Sweden, there were endless taigas full of blood sucking mosquitoes!

By wintertime, fortunately, all winged imagoes disappear. Swedish taigas are inhabited by gigantic wild moose (*Alces alces*). During that time, I frequently hiked in the taiga with a friend from Lithuania. Her name was Gabrielė Indrišiūnaitė.

At Uppsala Universitet, we were not required to wear any uniform. As at the University of Edinburgh, there was not a single university campus. There were several campuses spread throughout the city. The University Hall, the Gustavianum Museum, the Carolina Rediviva Library, and the old and the new botanical gardens are in the city center. Not far from there are the buildings of the Engleska Parken and the Evolutionsbiologiskt Centrum. This last building has a small natural history museum. In a different part of the city, there is a building known as the Ekonomikum, where business classes are taught. To the south, there is a university hospital known as Akademiska Sjukhuset. This hospital was built over Mons Domini. Further south, there are two large buildings: The Biomedicinskt Centrum (BMC), where there are biological sciences labs; and the Ångströmlaboratoriet, where there are physical sciences labs.

One day I went to bird with a lass named Siri Schmiterlöw. She told me about how marvelous it was to work in bird banding. After birding and talking to her, I was again interested in birdwatching. I had already mostly lost my interest in that hobby while at the University of Edinburgh.

My best professor in Uppsala was by far Suparna Sanyal. We learned a lot in her lectures, and they were never boring. Most of my fellow students who were also studying a master's degree in biotechnology came from India.

I had a friend whose name was Karthik. He was a Hindu priest that worshipped God Shiva. He told me a lot about the religion and the traditions of Hinduism. Another friend of mine was Prashanth. He was the son of a Jain priest. He told me a lot about Jainism. That is how I got acquainted with plenty of the eastern foundations of the teachings of Enríquez, the lawgiver. Hindu religion is polytheistic. Some Deities are associated with certain non-human animals as in Pharaonic Egypt. For example, God Ganesha is associated with the elephant (*Elephas maximus*) and God Hanuman with the monkey (*Semnopithecus entellus*). The Gods that were most worshipped by my classmates were Vishnu and Shiva. The followers of Shiva painted a third eye on their foreheads. Karthik recited prayers and

incantations in Sanskrit. He was a practitioner of Hindu magic, the so-called tantra. Hence, he performed wonderful miracles. He had a great wisdom regarding Indian philosophy. If you want to listen to the sort of music that my Indian classmates liked, please watch the following video: "'Sheila Ki Jawani' Full Song | Tees Maar Khan | Katrina Kaif" (2010).

There was a strange urban legend at my university... It was said that in the park that is found north of BMC there are secret tunnels that were built during the Cold War to hide secret military technology. BMC has a basement where I sometimes had lessons—just below the north of the building there is a long corridor, but it does not have any obvious doors that go below the park.

During the time I was living in Uppsala, I stayed in a hotel, the Scandic Uplandia. It is in the city center (59.860435131208476, 17.638645485260415). The view from my room's window was stunning. One could see the magnificent Uppsala Cathedral. The relics of Linnaeus, the father of biological systematics, are buried in a tomb in that cathedral. On the Day of the Dead, I cut an inflorescence of an Aztec marigold (*Tagetes erecta*) that was growing in the garden of a student society known as Norrlands Nation. I placed that inflorescence on top of Linnaeus's tomb as a mortuary offering to his memory. Botanists refer to the inflorescence of *Tagetes erecta* as its capitulum. The remains of Linnaeus were designated as the type specimen of modern humankind by botanist William Stearn (1959) in his paper titled "The Background of Linnaeus's Contributions to the Methods and Nomenclature of Systematic Biology" that was published in "Systematic Zoology" 8(1): 4–22. I befriended Tove, the redhead receptionist of the hotel where I was staying. She worked during the night and early morning shift. Every night, I talked to Tove. She was blue eyed. Her eyes like the sea contrasted with her hair like fire. Her smile was cute and charming. Her body was gracile and delicate. I loved sweet Tove a lot!

During the academic year 2010–2011, I lived in a comfortable three-star hotel. Living there was a brilliant decision, because in the Flogsta buildings where most students live, there was a bed bug (*Cimex lectularius*) infestation. These hemipterans suck human blood!

Winter in Sweden is radically different to winter in Mexico or in the United Kingdom. In Sweden, temperatures can be as low as -27 °C! In Scandinavia, I saw something very strange. Some people use dogs (*Canis familiaris*) as pack animals or as draft animals, as if they were horses (*Equus caballus*) or donkeys (*Equus asinus*). On Mount Dovrefjell, Norway, I saw how a man was hiking while being followed by his dog. The dog was carrying the guy's food in bags that were at each side of its body. In Uppsala, I saw how a cart with wheels was

being drawn by a dog. It is not strange that the Norse peoples of old imagined that some wolves could be used as if they were horses, as some Norse Deities were wolf riders.

Jurisprudence

Jana the Refulgent did not consider that learning should be an individual experience. She thought it must be a group experience. As learning is a cultural experience, it ought to emulate the way cultures are created. Cultures are created by human societies. So, the best possible form of learning should involve a group of people. That is why Jana the Refulgent believed that the ideal learning method would be like in the University of Edinburgh Philosophy Society. It was a learning process based on the ideas of different thoughtful human minds interacting at the same time with each other. This is like the dialectical process that, according to Hegel, has happened throughout history. Such dialectical evolution involved the theses and the antitheses of several thinkers being synthesized throughout the ages. In the case of the seminars of the Philosophy Society, the very same process that occurred during European history according to Hegel happened in a very brief time within a classroom in Teviot Row House, at the University of Edinburgh. To learn about the relationship between Hegelian dialectics and history please read the book by Hegel (1807) titled "Die Phänomenologie des Geistes."

Jana the Refulgent thought that the first requirement an individual needs to fulfill to become a scientist is being someone who wants to learn something due to curiosity. Therefore, a scientist should be someone who wants to study the Universe and nature by means of empirical observations. However, the narcissist professor who was the principal investigator of the lab where I worked with the gene that codes for sturgeon (*Acipenser oxyrinchus*) octamer-binding transcription factor 4 (*stOct4*), was not like that.

The narcissistic professor was nothing more than a mere bureaucrat that administrated the money so his employees would work and would credit him as an "investigator" in all the papers that they wrote. The reason why the most important scientists very frequently did not fulfill the requirements that Jana the Refulgent believed were needed to be a scientist is a historical problem since the Industrial Revolution.

Economist Adam Smith (1776) wrote a book titled "An Inquiry into the Nature and Causes of the Wealth of Nations." As was outlined by him, division of labor leads to increased productivity. As research labs are almost industrial facilities, labor is highly divided to improve efficiency. Under this scheme, principal investigators very often stop being scientists to become executives.

Nevertheless, this industrial mentality was not the initial attitude of mind that started science at the beginning. To humanize science and to show to postdocs that their bosses are also scientists, the bosses should also work, even if briefly, in the lab. Psychologically speaking, this would be very advantageous, as postdocs would be more motivated to work and would suffer from less depression if they would see their bosses working as scientists together with them. Indeed, depression and stress are ubiquitous among modern science researchers. If principal investigators would truly investigate their subject, lab leadership would be based on the admiration that postdocs would feel for their leaders, and not only in the duty that they must fulfill due to their job contract.

Strangely, the reason why the narcissist professor was furious with me was due to the way that I publicly displayed my worship and extreme admiration of Jana the Refulgent during my supervisor's graduation party. I was praising Jana the Refulgent as usual. Then several postdocs and students of the narcissist professor started to joke by saying that they would prefer to work in the "lab of Jana the Refulgent," having Jana the Refulgent as their boss and principal investigator. This was of course just a joke, as she was neither a scientist nor a research group leader. Nonetheless, this conversation was a challenge to the wounded self-esteem of the poor, vulnerable, narcissist professor. Even if vulnerable narcissists seem to have a lot of self-esteem, they in fact do not love themselves and do not think they are great. Hence, as the self-esteem of the professor was too fragile, he suffered from what psychologists refer to as a narcissistic injury. Thus, the professor attempted to emotionally hurt me during the graduation party by saying: "The taxonomy of organisms is not a true science. You are not a scientist!" Then I replied to him, "I agree with you, sir. It is not a science. It is an art. And behold that I am an artist!"

I gave a bouquet of flowers that belonged to genus *Cattleya* to Magdalena. A month later, I decided to stop being her lover. I also decided to leave the city of Edinburgh to perform my Grand Tour in Greece and Italy. One may think that this shows that I did not love Magdalena. However, I did love her. The reason why I broke up with her and left for my spiritual pilgrimage was that I loved myself more than her. Therefore, I considered that due to all her mental health problems, Magdalena would not be a good wife for me. According to Jana the Refulgent, it is always more important that we are healthy than to please others by keeping an unhealthy social or couple relationship. Jana the Refulgent always told me:

"If a friendship is going to harm your health, end that friendship. Your health and well-being are always more important than the

health or well-being of others. It doesn't matter what others think of you. What you think of yourself is always the most important opinion. Always think good thoughts about yourself."

Asia the Mystic thought that all human beings can be saints, but not all of us have realized we have an inner holiness. Let us say that there is someone who has discovered the inner holiness and acts righteously—if that person decides to embark on a spiritual mission, then God YHWH sends His holy angels to free the initiate from all evils and to open the path of the pilgrimage. Such a spiritual mission does not need to be useful to the Deity, to humanity, or to an institution led by people. The spiritual mission can be an individual, inner mystical search. Under the paradigm of Asia the Mystic, I had the mystical experience of having seen a messenger that healed me, so I could perform my Grand Tour that was a spiritual pilgrimage to the historical roots of Western culture.

Jana the Refulgent traveled a lot to different destinations all over the world. They were not exciting travels full of adventures such as Toby Nowlan's or Héctor Gómez de Silva's expeditions. I would say they were just regular vacations, like the ones enjoyed by average holidaymakers when they want to sightsee in other countries. Yet, Jana the Refulgent claimed that she always learned something new in each one of her holidays abroad. Living in places with different cultures and seeing new places, and different ways of thinking enriched her worldview by allowing her to know more about life and human beings. This is why my Grand Tour was an educational journey whose only focus was to visit places that, in a cultural sense, were highly meaningful. Traveling through Greece and Italy allowed me to travel from the dawn of Western civilization in Greece to the growth of this culture as promoted by the Roman Empire, to the Middle Ages and its Christian worldview, and to the end of the Middle Ages, when Graeco-Roman high culture returned during the Renaissance. Experiencing the history of Western culture during holidays entails getting to know my own cultural history before I was born. Indeed, we do not just acquire our culture during our lifetime. Our culture is ancestral and by far older than us. Knowing its origins means knowing ourselves.

When I bade farewell to Jana the Refulgent, I fondly loved her. She actively did as much as she could so I would love her. I can truly say that I had never met a woman who was as beneficial to me as her. When Jana the Refulgent first met me, she considered that the best way to help me and to protect me was making me fall in love with her. In this way, I would always wish to be close to her and she would easily influence me to do whatever she thought would be the best for me. Moreover, this allowed her to share sexual pleasure with me, and in this way, she

showed me with her body how much she loved me. After my bad experience of having fallen in love with Verónica Jiménez without having the courage to attempt to start a relationship with her, and given my dreadful shyness toward women, the sexual love that I got from Jana the Refulgent was also a teaching that helped me to get rid of one of my worst flaws.

According to Asia the Mystic, when I bade farewell to Jana the Refulgent, there was no real farewell. The reason is that Asia the Mystic thought that in this universe, all of us are united. This union was according to her an objective truth about the Universe that is opposite to our deficient perception that entails thinking that we are all different beings living within the Universe. She thought this Universe is in fact a single physical living thing that is composed of individual "cells" that would be us, the biological organisms. As Asia the Mystic thought that the Universe is only One, all of us are part of that whole... Hence, we are always connected. We are all part of the same universal spirit.

Nevertheless, our ignorance and lack of meditation, praying time, and spiritual exercises do not allow us to realize that we are all part of all of us and we are never truly separate from each other. That is because we are all part of the same living thing. Thus, under this idea of Asia the Mystic, as there is a divine omnipresent being that is found everywhere in equal proportion, we are also united by the same universal spirit, and Jana the Refulgent will never be far away from me, as no one is ever far away from another person. Thinking that we are far away from someone else is just a delusion produced by our faulty perception. Asia the Mystic thought that this omnipresent divine being is the Creation, the daughter of God YHWH.

Jana the Refulgent lived as a foreign student in the United States of America before I lived as a foreign student in the United Kingdom. In a way, she followed the same path as I did before I would follow it. She did it when she was younger than me. Therefore, having followed the same path before, she knew how to guide me. What transformed Jana the Refulgent from a frisky girl into a wise young woman was being tricultural. The experiences of having lived with her family as a kid in the Czech Republic, and later having lived alone as a teenager in the United States of America and in the United Kingdom, transformed her into a woman who knew the world quite well. When I went to live in Uppsala, I got acquainted with a new culture and with new places. In that way I was able to see the world and my life from a new viewpoint. I believe that only then did I acquire the same level of multiculturalism that Jana the Refulgent acquired many years before me as a teenager. The reason is that before traveling to Sweden, I had only lived in two

different cultures and not in three different ones.

Asia the Mystic considered that all that exists that is good comes from God YHWH. By this, she did not just mean that the Deity creates it with His Word so it can appear in this world. She also meant that the reflection of the majesty of the Deity when projected onto the physical world is what is good. That is why, according to Asia the Mystic, the logo of Uppsala Universitet would be a correct cosmological model. The Platonic divine sphere that has the tetragrammaton written on it is obviously the Shekhinah, also known as Holy Spirit, the presence of God. The light rays that emanated from it are the sources of the movement and life of the lower physical sphere, the tangible material Universe. The reflection of the greatness of God YHWH in this physical Universe would be of course all the good material things that we can perceive and enjoy.

The tetragrammaton, the letters of the name of God, are magical and have great supernatural power. The secret to controlling the entire physical Universe is contained within them. That is why the spiritual sphere that illuminates the physical sphere has this name written on it. The tetragrammaton has such mighty power that that is the reason why theurgists or wizards such as Asia the Mystic were known in the past in Hebrew as “baalei shem.” This means the “masters of the name.” The “name” is, of course, the tetragrammaton.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 24. *SOMATERIA SPECTABILIS*

Sweden is a radically different place than the United Kingdom, especially culturally. That difference is greater than the cultural difference between Mexico and the United Kingdom. It was as if I had moved to a different planet. Suddenly, my life was very different. During that time, I read all the writings of Aristotle. They are known as the "Corpus Aristotelicum." Before that time, I was very stressed, but while studying biotechnology in Sweden, I relaxed. My daily philosophical study helped me to reframe everything that happened with Birgitta the First between the years 2005 and 2008. Moreover, I realized that during the time I became a devout follower of Jana the Refulgent, I somewhat forgot about the teachings of Emilio the Sage. Therefore, I decided to remember again the ideas that he taught me to improve my life.

This included having a spiritual point of view on life. However, I always continued to be a bit skeptical of any suspiciously unfounded claims, as Jana the Refulgent taught me to be. I was able to get my life in order. I was full of inner peace. After having thought about everything that happened to me in the previous years in a methodical and analytical way, I realized interesting stuff about myself. For example, I noticed that due to Birgitta the First, I lived in a way that prioritized beliefs and matters that were quite unimportant. My self-analysis allowed me to have a better quality of life. Furthermore, I was happier than ever before. I still had so many memories of Mariana's online chat. I used these memories to establish the canonical jurisprudential interpretation of the teachings of Emilio the Sage. I decided that the conclusions that Mariana and I arrived at were to be treated as the definitive meaning of the teachings. In that way, the wisdom of Emilio the Sage could be pragmatically applied to solve life's difficulties. In the same fashion, I attempted to recreate the philosophical procedures used in Mariana's online chat to organize and systematize the teachings of Jana the Refulgent. This definitive jurisprudential interpretation would allow me to apply them more efficiently.

It is well known that personality is not the only thing that influences the behavior of people. The power of the situation is also important. That is why philosopher Diogenes of Sinope criticized the ideal "virtuous man" that was suggested by Plato. You can read this in "The Life of Diogenes of Sinope" in "Lives and Opinions of Eminent Philosophers." We cannot be truly virtuous because we do not only behave according to our personality, but we are influenced by the society and situations that

***Somateria spectabilis* (Linnaeus, 1758) (Anseriformes: Anatidae)**

Illustration made by Lorena Medina. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 863.**

surround us. In his "Enneads," Neoplatonic thinker Plotinus reformulated the concept of virtue ethics so it can be applied to everyday life. He essentially said that one should not be a virtuous person. That is because this is, of course, impossible. Imagining that this is possible entails making a mistake known as the fundamental attribution error. According to Plotinus, the best thing to do is instead to imagine a religious or fictitious heroic character. Then we should think about how this imaginary character would behave in a certain situation that we are currently facing and then try to imitate the imaginary person. Plotinus based his approach on Plato, when Plato stated in "The Republic" that certain heroic verses of the "Iliad" and the "Odyssey" must be emphasized to positively influence people.

Nevertheless, Plato thought that it was possible to be virtuous. By following the model suggested by Plotinus, one ought to perform dialectics. Firstly, one ought to frame the problem that we have as a question. After this, we must define carefully and clearly in the most conscientious manner all the nouns and adjectives of the question that we framed. We must necessarily do this to understand what that question means. The act of defining all the words of a statement was named "semantic ascent" by philosopher Willard Van Orman Quine (1960) in his book "Word and Object." After having done this, we must follow the example of Plotinus. We follow his example by asking ourselves what Emilio the Sage or Jana the Refulgent would do if they faced our dilemma or problem according to their respective teachings.

Dialectics can be divided into three parts: a thesis, an antithesis, and a synthesis of both. This is according to philosopher Johann Gottlieb Fichte (1795) in "Grundriß des Eigentümlichen der Wissenschaftslehre, in Rücksicht auf das Theoretische Vermögen." The opinion that we would generate based on the teachings of Emilio the Sage is the thesis. The contrasting opinion that we would generate based on the teachings of Jana the Refulgent is the antithesis. The synthesis of both would be the result, the answer to our initial question. This answer is an instruction that tells us what we must do. It is the right behavior to perform. The most lengthy and difficult part of a dialectical reflection is finding suitable teachings to answer any question.

Emilio the Sage and Jana the Refulgent obviously did not answer every possible philosophical question that we may have in their speeches. To obtain answers, I used the methods employed by theologians to find answers in the "Bible" or in the "Qur'an." Theologians attempt to find answers in religious texts that are not included in such laws. By using their hermeneutical methods, I looked for answers in the teachings that I

got from Emilio the Sage and Jana the Refulgent.

Emilio the Sage was like the seven antediluvian Apkallu of ancient Mesopotamia. Jana the Refulgent was like the seven sages of ancient Greece. Like them, I should also attempt to be wise.

To rule my behavior, the sayings of Emilio the Sage and Jana the Refulgent have primacy above any other law or commandment. Their rules are more valid than governmental or ecclesiastical laws. It is always more important for me to live according to the principles that my spiritual teachers taught me. In general, every human being ought to have an individual code of ethics that would be above the laws made by evil people in power, such as politicians or church leaders. This would be good, because if everyone would place ethics above the commandments of socially accepted authorities, there would not have been monstrous political actions. For example, political thinker Hannah Arendt said that plenty of the crimes carried out by the Germans during World War II did not happen because the German people were evil. They happened because many Germans were merely obedient to their authorities. We should not forget that the Shoah, the genocide against the Jews, was lawfully ordered by the Nazi government—citizens merely followed the orders of their superiors dutifully. You can read this in the book by Arendt (1963) titled "Eichmann in Jerusalem: a report on the banality of evil."

If people would prioritize ethics above laws, there would not have been mass executions of innocent people that were accused of witchcraft or heresy, such as Giordano Bruno. Sophist Socrates the Elder was considered a martyr by his disciples because he was condemned to death by an unfair government. Socrates the Elder did not recant his beliefs even if they went against the ideology of the government. He was ready to die for what he believed. He was a hero. Socrates showed that ethics, the true justice, must be above governmental laws, the false justice carried out by weapon-wielding, sinful people. You can read about Socrates's trial in the "Apology of Socrates" by Plato.

It should not be a function of the government to ensure that citizens behave well. It should be a function of citizens to ensure that politicians behave well. The ethical enforcing tool of the citizens is disobedience. This is not a call to anarchy. Whenever one's ethical code of conduct matches what the government says, one ought to follow the government, as the government has shown that it is fair. Only when the government goes against our code of ethics do we need to avoid doing what they ask us to do. Enríquez the Lawgiver was obviously mistaken when he claimed that it is good to always follow the orders of the authorities. He also was wrong when he

claimed that we ought to love our motherland more than individuals.

By means of my dialectic reflections, I decided to stop requesting advice from Jana the Refulgent. Before starting my dialectical reflections, I always enquired either Emilio the Sage or Jana the Refulgent to ask them how to live. As now I had a rational tool that allowed me to reach my own conclusions by using their teachings, I did not need them anymore. I decided to set boundaries to the time that they were able to state rules. Everything that Emilio the Sage said between Saturday the 16th of January 1999 and Friday the 2nd of August 2002 is considered a ruling that can be used in the dialectical reflections. Everything that Jana the Refulgent said between Friday the 31st of January 2003 and Friday the 8th of January 2010 is considered a ruling that can be used in the dialectical reflections. My new ethical code granted my dialectical reflections the highest normative power over my life and behavior.

Dialectics became my master instead of a human such as Emilio the Sage or Jana the Refulgent. Dialectics becoming my master entails that reason became my master. I started to live a rational life. I substituted the words of Jana the Refulgent for my own rational reflections to solve my life's challenges. My dialectical reflections started while I was in the Arctic, on Friday the 5th of November 2010. I was staying in a hotel named Tysfjord Turistsenter in Storjord, Hamarøy, Norway (68.19320133034594, 16.026037143093575). My first dialectical reflection was named "The Unification." The question answered was: "How can I unify the teachings of Emilio the Sage and of Jana the Refulgent?" I remember my first trip to Norway very fondly, not just because I started my dialectical reflections there, but because I watched a wild king eider (*Somateria spectabilis*), a majestic duck!

In the following weeks, I spent every Sunday performing a dialectical reflection on a different topic. I always performed the weekly dialectical reflections in my room at the Scandic Uplandia hotel in Uppsala. In total, I performed 24 dialectical reflections.

The most important ones were performed on Sunday the 16th of January 2011 and on Sunday the 13th of February 2011. In the meditation of the 16th of January, I changed my direction in life and my priorities. Its name was "The Teleology." The question answered was: "What is the meaning of my life?" In the meditation of the 13th of February, I freed myself from the trauma that I suffered due to Birgitta the First and I carefully planned how to protect myself in case Birgitta the Second would arrive. This meditation was strangely named "Natalie's Last Embrace." The reason was that before February 2011, I thought that my life was happy until Natalie's last embrace, as after that event, I met Birgitta the First. I was feeling sad and ashamed that I wasted so many years of my life suffering. The reason

why I linked Natalie's last embrace to my suffering was that according to me at that time, I stopped loving good Natalie to start loving sinister Birgitta the First. The question answered in that dialectical reflection was: "Did I truly waste my life after Natalie's last embrace?" The answer was "no" and quite irrelevant, but the path to arrive at this answer empowered me to prevent the attack of Birgitta the Second.

If there was anything important that I learned in my dialectical reflections, it would be that we must learn to think by ourselves in order to feel good. As Marx and Engels (1848) said in "Das Manifest der Kommunistischen Partei," the most popular worldview that exists at a given time in history is nothing else but what the ruling class believes. Such ideology economically benefits the ruling class. I can add to this the following observation: The fact that the ruling class uses its hegemonic power to indoctrinate all members of society to think as them does not mean that such fashionable doctrines are beneficial for our mental health.

That is why we need to think for ourselves, to avoid living intellectually chained to the ideological fashions of our own time. We must generate our own individual, personalized philosophy, even if it is centered around topics that would not be interesting to the people of our own time and might be unfashionable. The reason is that all possible outlooks on life have emotional vulnerabilities that make us susceptible to being manipulated or to feeling emotional pain. Hence, we must willfully build the least vulnerable outlook on life possible. This should be done in the same way that an engineer diminishes the vulnerabilities of a website or of a computer program to avoid them being exploited by cybercriminals. I prepared myself for the coming of Birgitta the Second by rebuilding my outlook on life so it would be less vulnerable to attacks.

In an ideal world, from the point of view of the government, economic utilitarianism should be above ideology. Economic utilitarianism means maximizing wealth among the citizens. This is not the same as the ethical utilitarianism criticized by Jana the Refulgent. Ethical utilitarianism entails maximizing happiness, as originally defined by philosopher Jeremy Bentham (1776) in "A Fragment on Government." Happiness is too subjective.

If an ideology allows economic utilitarianism, it should be promoted. As soon as it would not work for this aim, it should be discarded. From the point of view of the citizen, things should work differently. A citizen should ALWAYS discard whatever ideology was not self-made. A self-made ideology is created individually by mixing philosophies from all ages in a rational fashion. This is because any other possible ideology would not work for us, but for an economic or political aim

other than our personal mental health. We must be the builders of our own ideology. Governmental ideology should aim for economic utilitarianism. Individual ideology should aim for mental health. Citizens with a different ideology from that of the government avoid groupthink and allow the dispassionate evaluation of all policies. My argument seems strange because it seems that by following my opinion and looking for your mental health, you would not be creating your own ideology, only following mine. Yet, my view is not an ideological principle. It is an ethical principle that can be fitted to different ideologies.

Governments should not use ideology to brainwash people to create the perfect citizen. Citizens should choose their government according to what they believe, not the other way round.

The main problem with ideology is that it always ends up brainwashing the very same people who promote it to allow social change to happen. In that way, the people who promote it end up being enslaved by ideology as much as the rest of society. Their original aims that they wanted to achieve by promoting this ideology may end up being secondary. Ideology may end up having more importance than the reason why it was created. An example of an ideology harming the purpose for which it was created is fighting against quackery in medicine. Some people want to exclude quackery because it is less useful than scientifically proven medicine or it is outright dangerous. They do this because they do not want to harm the health of patients. However, the placebo effect is useful to aid patients alongside scientific medicine, but their ideology does not allow them to use complementary medicine, even if its placebo effects could help patients, because it is not scientific in nature. The ideology created to help patients ends up restricting the options to help the patients feel better.

Another example is Nazi fascism. Hitler wanted to conquer Europe. To do that, he convinced the Germans that they were a superior race destined to conquer inferior races. This led to World War II, which led to the downfall of Nazi Germany. Ideology ended up being more important than the aim of having hegemony over other European countries. That led to the totally opposite result from what was originally intended. Germany was conquered; it was not the conqueror.

A third example is love and forgiveness in Christianity. Pagan philosopher Plato wrote in the "Symposium" that "in pain, in fear, in desire, or speech, Love is our best guide and guard; He is our comrade and our savior. Ornament of all Gods and men, most beautiful leader, and the best!" Thus, the Romans, who inherited pagan Greek philosophy, idealized love. Christianity, a Jewish religious movement that appeared in the Roman Empire, wanted to create a

society where love and forgiveness would rule people.

In the "First Epistle of John" in the biblical "New Testament," it is written: "Dear friends, let us love one another, for love comes from God. Everyone who loves has been born of God and knows God. Whoever does not love does not know God, because God is love." At some point St. Thomas Aquinas, a Christian, stated in the "Summa Theologica" that it was good to kill people that would have a different interpretation of the "Bible" than his own beliefs. He wanted to kill the so-called heretics. That was to protect the Christian faith. Christian faith tells you to love and forgive, but according to St. Thomas Aquinas, to protect it you need to stop loving and forgiving people who think differently. He went against Christian faith to protect Christian faith! Do not think Hitler and St. Thomas Aquinas were different than you. Political ideology can do the same to you. St. Thomas Aquinas was the holiest man of his time. Hitler was the vilest sinner of his time. Political ideology intoxicates both the saints and the sinners!

If you are a leader and want to diminish the bad side effects of ideology, learn philosophy, but do not learn it from a living professor. Learn it from someone who is not being brainwashed by the ideology you want to promote. Learn philosophy from the dead by reading the books of such authors. In that way, you can master ideology and avoid ideology mastering you. Ideology is your tool, not your god. Your end is always more important than your means to achieve it. An ideological belief system is always a means, not an end. Never believe or trust what you say, always remember that you say it only because that is the most convenient stuff for you to say. This will keep your sanity. Always be skeptical of your own thoughts, words, and actions.

I will now give advice to average people devoid of macropolitical power for real world politics, not for utopias. Logician Bertrand Russell (1946) claimed in "A History of Western Philosophy" that when the Western Roman Empire was almost falling, its best intellectuals were only worried about how to access Paradise after dying, so their souls were saved. They did not spend time thinking about how to save the empire from its economic, social, and military issues. I think this can teach us a lesson for our own times. This sounds paradoxical, but when we follow ideological hegemonic fashions, we often overlook our true problems. To diminish these effects, try to spot the main ethical, political, and activism trends in the news, advertisement, social media posts, and popular culture. Then, whenever you start thinking about such topics, immediately think about something else. Politicians want you to always think about the issues that they think matter and for you to frame your worldview

according to them, either supporting them or opposing them. Do not think about stuff in favor or against such ideas, just think about something entirely different. Do not worry about an issue that polarizes society—all society is thinking about it. You must rather worry about what society is not thinking of, as its true troubles might be hidden there!

A scientific hoax was performed in December 2010. You can read it in the erroneous paper by Wolfe-Simon et al. (2011) titled "A Bacterium that Can Grow by Using Arsenic Instead of Phosphorus." It was published in "Science" 332(6034): 1163–1166. Do not believe it. There are no species of Halomonadaceae that grow using arsenic.

In Sidi Bouzid, Tunisia, a young man named Mohamed Bouazizi set himself on fire on Friday the 17th of December 2010. He was protesting the government of President Zine El Abidine Ben Ali. This event triggered a revolution in Tunisia that soon spread to several Arab countries. This historical event was known as the Arab Spring. American president Barack Obama decided to change the American foreign policy in the Middle East. Instead of spending obscene amounts of money in new military expeditions abroad, as his predecessor George Bush the Younger, Obama started to withdraw soldiers from the wars that he inherited. Furthermore, his main change regarding his Middle East foreign policy was to support local Arab rebels who fought for democracy against dictatorships, by providing them with money, weapons, and a few servicemen. This was how Obama helped rebels during the Arab Spring.

By following this more democratic and cheaper strategy, the United States of America was able to have military control over the Middle East and avoid an Arab superpower controlling all the petroleum of that geopolitical region and its international prices. As a result of Obama's policies, islamophobia stopped being popular or politically correct. The United States of America stopped being an enemy of Islam or of the Arab people. Instead, Americans became allies of the Arabs that fought to have a fair democratic government. A weird outcome of this was that logical positivism stopped being fashionable. Logical positivism is a doctrine that states that any claim that cannot be demonstrated scientifically, mathematically, or logically is meaningless. Before the Arab Spring, scientism was used as a justification for the belief that religion was something irrational, false, and bad. Thus, because of this reasoning, Islam, a religion, was seen as something irrational, false, and bad. Therefore, the Islamophobic scientistic antitheist bigots who believed in this concluded that a war should be waged against Muslims and Arabs. This political belief was biased, racist, and intolerant

because the followers of this ideology did not hate other religions as much as Islam.

The Islamophobic antitheist bigots of the 2000s were also obsessed with anything that they labeled as "irrational." They targeted conspiracy theories as something irrational that they had to oppose. This helped the government of President Bush the Younger to have a movement of brainwashed militants ready to fight against every conspiracy theory that blamed the American government for the terrorist attacks that happened on Tuesday the 11th of September 2001. It was important for the government to get rid of these rumors because terrorists attacks were the justification for the Global War on Terrorism. The conspiracy theory label is useful not only to discredit false rumors, but also to dismiss non-hegemonic political discourse. The bigots claimed that "science" necessarily entails hating Muslims. This was obviously false and a misuse of science. Unfortunately, many average people stopped trusting science because of this political movement.

At the end of spring 2011, a woman named Rebecca Watson was sexually harassed by a stranger, a godless guy who asked her to have sex with him. It was 4:00 AM. Both were inside an elevator of the O'Callaghan Alexander Hotel. No one else was there. The helpless lady felt afraid of the pervert. Both were attending the World Atheist Convention in Dublin, Ireland. She publicly complained about the behavior of the pervert.

A grumpy propagandist named Richard Dawkins was the spiritual guru of all the activists of the Islamophobic scientistic antitheist movement. He is famous for having coined the word "meme." Most members of his hate group were men. The pervert dude of the elevator was one of his followers. On Saturday the 2nd of July 2011, Dawkins wrote a sexist comment in the blog Pharyngula. Its title was "Dear Muslima." He wrote it to verbally abuse and rebuke Rebecca Watson for complaining. Dawkins thought his male fans were entitled to sexually harass women, and that good women should suffer without complaining. He said women in Muslim countries suffered more, so Rebecca Watson should shut up. Plenty of Islamophobic men supported the misogynist comments of Dawkins, their spiritual guru. They insulted all the people who dared to criticize them for their endorsement. They also resorted to rape threats to silence women who disagreed with them. These sexists said that unlike religion, reason and critical thinking makes us good people. These sexists who claimed to be rationalists and critical thinkers could not argue rationally with the people who criticized them. This scandal was known all over Europe and in all the English-speaking countries.

Most English-speaking citizens that were against Islam, but that were not militant

Islamophobic bigots themselves, were against Muslims because they claimed that in some Middle Eastern countries, women were oppressed. This view is known as imperial feminism, because especially in the 2000s, it was used to justify the wars of conquest against supposedly morally inferior nations to reeducate them. When imperialist feminists realized that most of the militant members of the Islamophobic antitheist movement were misogynists, they stopped following them. As a result of this, Islamophobic activists stopped influencing average citizens, who stopped spending money purchasing their products and attending their events. This was the downfall of this far-right political movement.

The Islamophobic movement finished because President Obama had a new agenda after the Arab Spring, and the Islamophobic activists were not useful for him. All these changes changed airports radically. They became safer places, with no terrorists attempting to attack them; and no law enforcement officers intimidating and violating the rights of peaceful passengers. Unfortunately, the Arab Spring also led to bad outcomes, but they did not damage Europe or the United States of America significantly. Amongst these bad effects was the extremely lengthy Syrian Civil War and the massive migration of Syrians to other countries of Dar al-Islam and Europe.

2011 changed me radically. Before that year, I was a slave to my fears due to the bad influence of Birgitta the First. Philosophy helped me to live a better life. I stopped fearing failure in my scientific career, or failure in any future romantic relationships. I can say that after a long time I was at last, as psychologist Abraham Maslow would say, self-actualized! You can read what this means in the paper by Maslow (1943) titled "A Theory of Human Motivation" that was published in "Psychological Review" 50: 370–396.

I started 2011 doing something spectacular! I booked a private helicopter flight to fly over the frozen Baltic Sea to reach Lågskär Island. I did this on Saturday the 19th of February 2011. I went to Lågskär Island to watch the wild ducks that belong to the species *Polysticta stelleri*. They visit the island during winter.

The person with whom I spent most of my time was my friend Gabrielė Indrišiūnaitė. We met every weekend when we did not have any lectures or laboratory classes. We met to talk while we had dinner together or to walk around the streets and parks of Uppsala. She was an introvert but very hardworking. I know this because we were both teammates in the lab class of Professor Zaremba-Niedzwiedzka. Gabrielė was so hardworking that she got the best possible grades in her undergraduate degree in Lithuania. No other student in her class got as high marks as her. She loved to read

fiction literature, so she always cited it. She especially loved the novels by Tolkien.

I have a lot of respect for my former lecturer, Professor Zaremba-Niedzwiedzka, because in later years she discovered that eukaryotes are in fact just nucleated Archaea. In other words, we eukaryotes are the non-prokaryotic Archaea. This overthrew the textbook notion that there are three domains of cellular organisms. There are only two: the Bacteria and the Archaea. You can read about her amazing discovery in the paper by Zaremba-Niedzwiedzka et al. (2017) titled "Asgard Archaea Illuminate the Origin of Eukaryotic Cellular Complexity." It was published in "Nature" 541: 353–358.

In early 2011, it was said that in the next international botanical congress, the requirement of writing a Latin diagnosis to describe new species of plants would end. I disliked this idea because Latin is a romantic language that allows us to remember the glory of the days of old! Hence, I registered to attend the nomenclature section of the congress. I would attempt to avoid such a change.

In Uppsala Universitet, there was also a philosophy society, as in the University of Edinburgh. The Filosofiska Föreningen vid Uppsala Universitet met in the Engleska Parken campus (59.854022129847586, 17.627163093550916). Expert professors from other universities gave lectures. Nonetheless, these happened in small classrooms, not in huge lecture halls, as in the University of Edinburgh. What was different is that we had more opportunities to socialize with people, as after the lecture finished, the philosophical chats lasted until 3:00 AM. There was no moderator in such conversations, as there had been Mr. Owens in Cambridge Arts & Sciences. There was not even a previously agreed-on topic to be discussed, as in the University of Edinburgh. People who attended the meetings spoke about whatever topic was interesting with other people. Surprisingly, even though this system was so informal, conversations were always very philosophical.

In that philosophy society, I used to talk to Gina, a Swedish philosophy student. She was a blonde, blue-eyed, slender young woman with a stunningly hot body. She wore extremely short miniskirts. Her legs were splendorous. Once, we sat at the same table for a lecture. Such tables included two chairs. She noticed during the lecture that I was very interested in ogling her legs and that I made several attempts to see under her miniskirt. After the lecture finished, when we went to talk together, she spread her splendorous legs when she sat in front of me to show off to me her sexy, shapely thighs and her panties. Since that day, she always sat like that in front of me. I loved to flatter, hug, kiss, and caress Gina. Gina had an interesting idea—essentially, it was an extreme version of what the Annales school

said in the 20th century. The Annales school was named after an academic journal, the "Annales. Histoire, Sciences Sociales." The founders of this journal studied social history instead of the history of great people.

Gina claimed that no great person has ever changed history, and changes are social changes. Some leaders lead groups of people, that is necessary, but the change always comes from the masses. The masses that have ideals need a leader, but the leader does not create anything; such a person is just a historical accident.

There I also met Professor Remes. She was an expert in Plotinus and in Hellenistic and Roman esotericism. Her conversations were always amazing!

One day, Susan Haack went to the Filosofiska Föreningen vid Uppsala Universitet to give a lecture on philosophy of science. Even if she is acknowledged as one of the most eminent philosophers of science, I did not like her lecture. The reason is that the "science" that she spoke about did not resemble the science that I studied and that I had experienced in labs after spending time with scientists. It seems to me that the "science" discussed by the philosophy of science is not real science. I think all philosophers of science should spend at least five years of their life working in a science research group, not as philosophers, but as average postdocs doing the same tasks as any postdoc, including lab work and submitting papers to academic journals. In that way, the current ideal and almost imaginary "science" of the philosophers would end up looking the same as real-life science. As C. P. Snow wrote in his book, "The Two Cultures and the Scientific Revolution" (1959), the sciences and the humanities are split cultures. Philosophers of science should be scientific researchers themselves, not merely having a science degree, but having the experience of being postdocs that actively perform scientific discoveries.

As part of my master's degree in biotechnology at the Uppsala Universitet, I took a class with Professor Svärd where I needed to interview a scientist. I interviewed Stellan Hjertén. He is a very important man, as he was one of the researchers who developed the methods used to separate molecules using chromatography and gel electrophoresis. This research allowed the modern techniques used in modern genetics, biochemistry, and molecular biology. Hjertén told me that the industry became rich using the work of other people. It also stopped technological advancement by only selling what was already developed and not innovating new technologies, as their priority is only money. It is sad to see how a man who did so much for humanity is so underrated. It is a pity that he was so frustrated. Is this what science is like?

In 2011 I read the "History of Animals" by Aristotle. It is an extremely fascinating book because it mixes biology and real creatures

with folklore and mythological beasts. Since then, it has become my favorite book.

One day, while I was walking not far from the new botanical garden known as Botaniska Trädgården, I saw a fairy ring. This means an oval made of mushrooms known as *Marasmius oreades*. The most astonishing feature of this fairy ring was that it was a perfect circle on the lawn (*Festuca rubra*). According to a legend, these ellipses made of basidiocarps are miraculously produced by fairies that dance in circles during nighttime.

During summer, the Sun does not set in a large part of Sweden. Even at midnight, one can see the Sun in the sky! At the beginning, this natural phenomenon freaked me out, but later I got used to it.

In Sweden, I visited Viking archeological sites. I visited one of the oldest clonal trees that exist. It is a *Picea abies* that is nicknamed Old Tjikko. It is 9550 years old! I was also able to watch a wild gyrfalcon (*Falco rusticolus*).

At the beginning of the summer holidays, I flew to Svalbard. This island is not far from Sweden. In Svalbard, I took a cruise in the Arctic Ocean. In the beaches where the cruise ship stopped, we saw wild polar bears (*Ursus maritimus*), walruses (*Odobenus rosmarus*), bowhead whales (*Balaena mysticetus*), beluga whales (*Delphinapterus leucas*), and reindeer (*Rangifer tarandus*). The most ubiquitous wild mammals in Svalbard were by far the seals (*Erignathus barbatus*, *Cystophora cristata*, *Pagophilus groenlandicus*, & *Phoca vitulina*). When I was in Magdalenefjorden during that cruise holiday, I found a pair of reindeer antlers on the floor, and I placed them with my hands at each side of my hood as if they were my horns! After the cruise finished, I individually visited the Svalbard Global Seed Vault, a marvelous basement where plant seeds are kept!

After returning to continental Norway, I went to watch feral muskoxen (*Ovibos moschatus*) to Dovrefjell! I found something about this place very peculiar. It was the huge number of lemmings (*Lemmus lemmus*) that were living in the tundra. They continuously crossed the trail where I was walking.

For two days, I visited my family in Mexico. From there, I took a flight to Santiago de Chile, a city in South America! I went to the top of the Andes, I visited the *Araucaria* forests, and I saw the Atacama Desert full of flowers after the snowstorms. In Cajón del Maipo, I saw several condors (*Vultur gryphus*). They are less glorious than the bearded vultures (*Gypaetus barbatus*) from Eurasia and Africa. Yet they are slightly larger. In Calama, I saw a wild guanaco (*Lama guanicoe*).

From Chile I flew to Sydney, New South Wales, Australia. There, I saw the world-famous Sydney Opera House. From there, I

went to the nomenclature section of the international botanical congress in Melbourne, Victoria. In the congress, I met a young dude named Richard Boyne who also assisted the nomenclature section. He became my good friend. In the nomenclature section, some people such as Lourdes Rico were against an infamous motion. The reason was that two Australian guys named Anthony Orchard and Bruce Maslin changed the type species of the genus *Acacia*. You can read this in the paper by Orchard and Maslin (2003) that is titled "(1584) Proposal to Conserve the Name *Acacia* (Leguminosae: Mimosoideae) with a Conserved Type." It was published in "Taxon" 52: 362–363. Apparently, this action offended some researchers as it was seen as an instance of cultural imperialism. *Vachellia nilotica*, the plant species that was originally the type species of *Acacia*, and most of the species that are evolutionarily closer to it, live in poor countries of Africa, Asia, and Latin America. *Acacia penninervis*, the new type species, and most of the species that are evolutionarily closer to it live in Australia, a wealthy, English-speaking country. As always, the richest people won. As part of the welcome pack of the nomenclature section, we all got a postcard with an image of a butterfly (*Papilio ulysses*). Inside the postcard, I made an ink drawing of a kangaroo (*Macropus giganteus*), such as the ones that I saw on my railway trip between Sydney and Melbourne. I sent that postcard by post to Prague, Czech Republic, and addressed it to Jana the Refulgent.

After the nomenclature section, in the main congress I went to a lecture by Peter Raven. He said that people living in industrialized and post-industrialized countries eat more food than what they need to live. He said such behavior was harmful for the environment. Raven was right, but he was fat. Even if my reasoning is ad hominem, I think that he should start to change himself before attempting to change other people.

Days before, during the nomenclature section, I spoke a lot. I was the only one that publicly defended the Latin language. However, during recesses, other botanists told me that they agreed with me, but apparently, they were not brave enough to oppose the majority. Even though I was not able to avoid that Latin would not be used anymore to describe new plant species, I was totally amazed by all the biodiversity of such a peculiar country as Australia is! I visited the tropical rainforest and the coral reefs in Cairns. I visited the desert in Alice Springs and the Uluru Rock. I also went to the *Eucalyptus* forests of Kakadu. I saw platypuses (*Ornithorhynchus anatinus*), bandicoots, quolls (*Dasyurus maculatus*), koalas (*Phascolarctos cinereus*), kangaroos, fur seals (*Arctocephalus pusillus*), whales (*Megaptera novaeangliae*), saltwater crocodiles (*Crocodylus porosus*), cassowaries (*Casuarius casuarius*), emus (*Dromaius novaehollandiae*), penguins (*Eudyptula*

minor), eagles, cockatoos, parrots, riflebirds (*Ptiloris victoriae*), and giant clams (*Tridacna gigas*). I saw all of them living in the wilderness. They inhabited the forests, mountains, deserts, and islands.

When I was in Cairns, I decided to look for a plant known as *Dendrocnide moroides*. It is a shrub that belongs to the family Urticaceae, a relative of the nettles. It is unusual that a birdwatcher would decide to go to the field to look for a plant, but this plant was special! Whoever touches a *Dendrocnide moroides* feels a terrible pain, worse than any other ache produced by any other plant toxin that is applied cutaneously. There have been dogs (*Canis familiaris*) and horses (*Equus caballus*) that have died because the leaves of *Dendrocnide moroides* touched their skins. It is said that a person even killed himself because the pain that he felt after touching the plant was unbearable. The pain can return several months later. I went together with a Swedish lass named Sanna to look for the plant at Lake Eacham, Queensland. We, of course, did not touch or approach the plant! Nevertheless, we saw it while being awed at it.

In Lake Eacham, there are some fish known as archerfish (*Toxotes chatareus*). They are named like that because they spit a mouthful of water (H_2O) at insects, so they fall to the water. Then they devour them. On her lower body, Sanna was only wearing shorts that allowed her legs to be bare and sandals that allowed her feet to be bare. Frequently, Sanna had to remove leeches (*Chtonobdella limbata*) from her feet and her legs. These animals attached to her to suck her blood. As I had boots and jeans, no leech attached to me. Sanna decided to stop having any schooling after high school. Instead of doing an undergraduate university degree, she decided to travel to sightsee as many countries of the world as possible. She was able to do this because her family was rich. One day, Sanna and I went to swim at the pool that is found below the Millaa Millaa Falls, Queensland. This pool was not made by humans. It was made by the waterfall. That day was cloudy and very cold, but as we had already traveled there, we decided to swim.

Even though it was cold, Sanna was just wearing a bikini, and I was only wearing shorts. I had not swum since I was nine years old, when I went on the school camping trip to Daniel Villagrán's house. Nonetheless, I noticed that I was able to swim even if I thought I had already forgotten that skill. Sanna was an exceedingly attractive young woman. She looked like the women that are hired to be glamour models. This means models who professionally work by posing erotically while being nude, in underwear, in swimsuits, or in sexy outfits. Sanna's hair was golden, and her eyes were blue. Her body was athletic and svelte. Her breasts were shapely. Her stomach was flat. Her

outie navel was swirly, a very rare and gorgeous variety of the belly button. Her waist was slim, and her hips were broader, so she had an hourglass body shape. Her thighs were fit and strong. When we traveled by bus, I did not look at the forests that could be seen from the window because I could not stop looking at her heavenly legs, as she wore extremely short shorts.

While flying by plane after leaving Cairns Airport, I saw the coral reefs of the Great Barrier Reef from the air. They looked very different from how they looked when I saw them underwater at Green Island. I was surprised to see that from a high altitude, the morphology of individual coral reefs resembled colonies of bacteria in a Petri dish. As it was said by the most holy Hermes Trismegistus: "That which is below is like that which is above and that which is above is like that which is below." This verse comes from the poem "The Emerald Tablet" that was written in the "Sirr al-khalīqa wa-ṣanʿat al-ṭabīʿa" by the legendary wizard Apollonius of Tyana, the lord of the talismans.

I participated in the 2011 Australian census when I was in Adelaide, South Australia.

After my holidays to Chile & Australia, I ended up having 1628 different species of birds in my life list according to the "Clements Checklist of the Birds of the World 6.6" (2011). My lifer number 1628 was the singing bushlark (*Mirafra javanica*). Unfortunately, my life list was not the only legacy that I got from my uncle Jorge Reyes Mejía. While I was in Australia, Georgina Reyes, the daughter of my uncle, visited my aunts at Mexico City for one last time. By that time, she was already an initiate of an African diaspora religion, although publicly, she was just a veterinary physician, because the membership of her cult was secret. Georgina Reyes was married to a man named Manuel, with whom she lived in Coatzintla, Veracruz. Georgina Reyes and her husband had two children. Such family frequently visited my aunts because Georgina Reyes was the only daughter of Esperanza that was loved by them.

Georgina Reyes never ate the food that my aunts cooked. The reason is that in her religion, plenty of poisons were employed, such as the alkaloids that Esperanza administrated to my uncle Jorge Reyes Mejía. The reason why Georgina Reyes mistrusted my aunts was that Esperanza, her mother, told her that they were evil. However, she was interested in my aunts' money and in whatever they could bequeath to her. That is why even if she mistrusted them, she kept looking for them. Enrique, the eldest son of Georgina Reyes, was instructed to convince my aunt Luisa to befriend Esperanza again. My aunt was angry about this, because she still remembered how Esperanza mistreated my uncle Jorge Reyes Mejía. When Luisa

wanted to go sightseeing with Georgina Reyes's sons at Downtown Coyoacán and at the park known as Viveros de Coyoacán, Georgina Reyes did not allow that. The reason may sound silly, but due to her religious beliefs, Georgina Reyes thought Luisa might steal the souls of her sons. That made my aunt feel angrier because she took care of Georgina Reyes many times when Georgina Reyes was a kid.

Finally, Georgina Reyes confessed to my aunt the reason why she visited her by asking the following question: "Luisa! I demand that you tell me this, who is going to inherit my grandfather's house in Cuernavaca?" Luisa was already furious due to the mistrust that Georgina Reyes felt for her and because, for many years, Georgina Reyes wanted her to befriend Esperanza. Thus, Luisa replied: "The house is going to be inherited by my nephew Peregrinus, my sister Marisol's son." In that way, even if I did not know it, while I was in Darwin, Northern Territory, Australia, I became the heir of the enormous Cuernavaca house that once belonged to my grandfather Tomás. Since then, Georgina Reyes never visited my aunts again. That day, I did not just become the heir of the Cuernavaca house. My aunts decided to disinherit Georgina Reyes, so I became the heir to all that they had! Mysteriously, since that day, there were no more cockroaches (*Blatella germanica*) in the kitchen of my aunts' house. The hexing spell over my maternal family ended.

The Arab Spring inspired protests in other parts of the world. People in these countries were also against the laws sanctioned by their respective governments because they did not benefit the citizens. On Saturday the 17th of September 2011, there was one such protest in New York City, United States of America. People were protesting the huge income inequality. This started the Occupy Wall Street movement. The Parthenon-looking New York Stock Exchange building is found on Wall Street. That is why the movement was known as Occupy Wall Street. Soon, in other Western countries, people protested income inequality as well. Rich people were threatened by this, so in the following decades, they promoted the ideas of identity politics to divide societies of Western countries.

To do this, they promoted divisive political ideology in mass media such as Hollywood films. The ideas that they promoted were the ones of Critical Theory invented in the 20th century by the academics of the Frankfurt Institute for Social Research. In this way the rich achieved that feminists were against the patriarchy; that dark-skinned people were against White supremacy; that members of the homosexual, bisexual, and transgender community were against heteronormativity; &c. Both the left and the right obediently followed the desires of the wealthy by being engaged in these struggles. Progressive leftists claimed that they were fighting for

diversity, equity, and inclusion. Conservative rightists claimed that they were fighting against the left to save the values of Western democracy from wokeness, cancel culture, and hypocritical virtue signaling. Few people could use their brains to think about anything else other than this struggle. In this way, the poor fought each other instead of fighting together for a better income. This strategy of the rich that entailed dividing the proletariat was based on the doctrines taught by Machiavelli (1521) in his book titled "Dell'Arte della Guerra." These struggles weakened the West politically.

This led to an atrocious value crisis. The values of the left were considered immoral by the right. The values of the right were considered immoral by the left. The diversity of ideas decreased to the point where all political discourse was limited to the divisive topics chosen by the rich. Education did not matter anymore. Even the most educated academics at universities were only obsessively engaged with the few ideas that were deemed important by the wealthy. I do not mean to say that these issues are not important. However, I do not think they should substitute all other forms of ethics or intellectual analysis, as they did in the 2010s and 2020s. This impoverished intellectual culture by reducing its diversity of topics.

Neither the left nor the right were doing anything to significantly change society. Unlike charity in Judaism, Christianity, and Islam, that truly helps the needy and the oppressed; the bourgeois hypocritical project of "decolonizing" culture only meant modifying language, changing the curriculum at university courses, writing more academic essays about minorities, removing monuments, canceling some museum exhibits, and including minorities in entertainment shows; but almost never helping the needy to improve their economic situation. The right was not doing anything to help poor people either, as to supposedly protect Western culture from progressive politics, they just wanted to willfully keep the values that support social stratification. In a way, both the left and right were avoiding social change by helping to protect economic stratification.

To understand my next laboratory jobs, it would be useful to define what antibodies are and how they work. Vertebrates have an innate immune system that is non-adaptive. In addition to this one, we also have a system that develops specific macromolecules to protect the body against specific threats. These proteins are the antibodies. Antibodies are coded by very peculiar genes because they are made by rearranging different gene segments to generate many possible gene products. Each lymphocyte only produces one antibody amongst all possible combinations. But the human body produces plenty of different lymphocytes with different antibodies. Some cells can present antigens to lymphocytes. An antigen is a foreign

molecule that frequently is dangerous because of being a toxin or being part of a pathogen. When these antigen-presenting cells find a lymphocyte with an antibody that can bind to their antigen, the lymphocyte starts to divide to produce plenty of cells that produce exactly that antibody. Antibodies bind to antigens by using Van der Waals forces, hydrogen bonds, hydrophobic interactions, and dipole-dipole interactions. In that way, they can neutralize threats and allow cells of the immune system to destroy them. Antibodies are used in the biotechnology industry because they have great specificity to bind desired molecules. Now, I can continue with my story.

To do my master's degree thesis, I went to a laboratory in the Evolutionsbiologiskt Centrum, where I worked with a neuroscientific topic. My new supervisor was an absolutely neuroticistic and irascible young woman who was doing her PhD degree in neuroscience. She was peculiar, because whenever she was infuriated, she verbally abused her bottles, her pipettes, and her Eppendorf tubes, even if no human other than her was inside that room. She talked to objects. Strangely, this lady was studying schizophrenia. She was studying how a transcriptional regulator known as quaking ribonucleic acid (RNA) binding protein was involved in human schizophrenia.

What I needed to do was to help find out how the different splicing variants of quaking RNA-binding protein (QKI) were expressed in human astrocytes. Splicing is the process in which different polypeptide sequences can be obtained from the same gene by changing the messenger RNA (mRNA) sequence. Astrocytes are brain cells that are involved in maintaining the brain microvascular endothelial cells of the blood-brain barrier. They also provide glucose ($C_6H_{12}O_6$) to the neurons. In addition to this, they help to maintain the ion concentrations in the cerebrospinal fluid that are needed for action potentials. They are also engaged in the creation and maintenance of synapses between neurons. To be able to find the presence of the proteins that are produced from the splicing variants of the mRNA molecules transcribed from the gene *QKI*, I had to perform immunocytochemistry in the astrocytes. First, rabbit (*Oryctolagus cuniculus*) antibodies against one of the QKI splicing variants were added. Then goat (*Capra hircus*) antibodies against the rabbit antibodies were added. The goat antibodies were labeled with a fluorescent dye. This dye is known as Alexa fluor 594. The same procedure was repeated with different rabbit antibodies against the different QKI splicing variants.

Eating pineapple (*Ananas comosus*) can sometimes lead to a slightly uncomfortable feeling in the mouth. This is caused by a

proteolytic enzyme known as fruit bromelain. One day, my supervisor did something bizarre. She ate a whole pineapple. As she ate a complete infructescence, the effects were by far worse than if she would have eaten a small part of it. Her mouth was damaged. She had pain. Her tongue and the inner epithelia of her mouth were noticeably inflamed. She even suffered from bleeding. I do not know why she ate a whole pineapple. If I would be very hungry, I would eat several different foods, not just a single big sorosis!

Some dreadful pests of that lab were bacteria that belong to the genus *Metamycoplasma*. These Mollicutes contaminated the cultures of human astrocytes. My supervisor asked me to remove my shoes when I was in the lab, because she thought this strategy would reduce the likelihood that the cell cultures would be contaminated by bacteria. Nevertheless, this was useless, because Mollicutes that contaminate cell cultures usually live in the mouths of researchers, not in their shoes. There is nothing special about the mouths of molecular biologists—*Metamycoplasma* live in the mouths of all humans. Every time the cultures ended up being contaminated by bacteria, my supervisor took revenge on me by rebuking me. That was unfair because I never went to the room where the culture bottles were kept. I was only engaged in the immunocytochemistry. I was very stressed, and I did not like to work there. I disliked how my supervisor verbally abused me, so I decided to work in a different lab.

It is fascinating to think that the astrocytes that I used in my work were descendants of astrocytes that once were part of a human brain inside the skull of a person. I sometimes wonder who that person was. I also wonder what that person thought using said brain.

The next laboratory where I worked for my master's degree thesis was found in the Biomedicinskt Centrum (BMC). The number of members of this research group was huge! Plenty of rooms on more than one floor of building B1 belonged to this research group. We were so many group members that Professor Helgi Schiöth, the principal investigator, did not know all of us by name. In fact, I never talked to him, and he never talked to me. I only knew who he was from seeing him and from all the rumors that the staff talked about him. As a matter of fact, I was a bit afraid of him because the ones who knew him claimed that he was a strict boss that was very severe. Madame Klockars was my new supervisor in this new lab. She was a good young woman and very sensible. Madame Klockars's personality was totally different from that of the young pineapple-eating woman that was my previous supervisor. In the new lab, I worked with flies that belong to the genus *Drosophila*. As Professor Schiöth's research group was enormous, he had several co-investigators working for him that managed

smaller subgroups of researchers. The co-investigator who was Madame Klockars's boss was Professor Williams. In Professor Williams's subgroup, all research was performed with flies. In his lab, researchers were studying a protein known as transcription factor activating enhancer binding protein 2 (TfAP-2). It was hypothesized that protein TfAP-2 was involved in the transcription of the genes *Tyramine β-hydroxylase* and *vesicular monoamine transporter*. It was known these genes were employed in the synthesis and secretion of a neurotransmitter and hormone known as octopamine. This "neurohormone" regulates the aggressive and reproductive behavior of *Drosophila melanogaster*. Madame Klockars, who was my supervisor and teacher, had to show that TfAP-2 was associated with octopamine. Therefore, I had to dissect the severed heads of *Drosophila melanogaster* to perform immunohistochemistry in them.

This was the technique that my former pineapple-eating supervisor taught me. The immunohistochemistry would be to detect the presence of TfAP-2 in the brain. After this, Madame Klockars would determine if such gene expression matched the octopaminergic neurons by looking at where these neurons were found, in turn by looking at the expression of the gene *Tyrosine decarboxylase 2* (*Tdc2*) in the brain. She would look at gene expression by using green fluorescent protein (GFP) as a marker. GFP was isolated in the 20th century from bioluminescent hydromedusae known as *Aequorea victoria*. In fact, the work I was doing in the new lab was by far less useful for society than the work I was doing in the previous lab.

Philip Goergen loved to sing the song sung by Rapunzel in the film "Tangled" (2010) while he was working. He always sang the same song repeatedly. If you want to listen to that song, please watch the following video: "Mandy Moore - When Will My Life Begin? (From 'Tangled'/Sing-Along)" (2010). Philip got on well with Madame Klockars, but he always criticized her because, according to him, she had children and abandoned them in a daycare instead of paying attention to them. In the desk next to where I was sitting, a Muslim guy named Awais sat. He and Jayasimman had to observe the behavior of the *Drosophila melanogaster* flies. That was all their job. Awais was always very angry because according to him, this was completely useless for his career. He said: "When I will apply for a job and the employers will ask me, what's your work experience as a biotechnologist? What am I going to answer? Am I going to tell them that I've observed the behavior of flies for hours?"

Madame Klockars was very afraid of trolls and ghosts. Trolls are mythological people from the Norse pre-Christian pagan religion. They are gigantic, evil, and eat normal people. When it was dark outside,

Madame Klockars always waited for her husband Oscar inside the BMC building. The reason was that she did not want to be alone outdoors at night because she was afraid of supernatural beings. When Oscar could not give her a ride, we went together to the Scandic Hotel, where beautiful Tove worked. Madame Klockars gave me a ride in her car on such occasions. She did this because she did not want to walk alone in the dark to the car park because she feared the supernatural monsters that haunted the taiga known as Stadsskogen. Madame Klockars always said: "I don't know how you can be so brave to go out collecting moths at night in Mexico without being afraid of ghosts..."

In October 2011, I went to a workshop on Platonism in Uppsala Universitet. The best talk that day was delivered by Håkan Håkansson. It was about Johannes Bureus, a Neoplatonic occultist interested in magic. Bureus's ideas were like those of Jakob Böhme and of Emanuel Swedenborg.

Among the audience that attended the workshop on Platonism, I met a young gentleman named Finn. In the past, he studied philosophy at the university. When Finn had to hand in a thesis, he submitted an essay that according to him would become one of the most influential texts ever written, as it would change world history. It was titled: "Nietzsche och Modernitetens Problem." In it, Finn defined the modern project as using the scientific method to have control over nature by creating new technologies. Modernity according to him is when people became aware that the world was changing due to the modern project. Finn thought that there were two reactions to modernity. The first one was Enlightenment, as suggested by John Locke, and the second one was Romanticism, as suggested by Jean-Jacques Rousseau. Finn thought both are now useless and a new philosophical agenda is needed. Finn suggested Nietzsche would be the perfect basis for the new philosophy. The reason why Nietzsche is more suitable is that he found the problem of modernity, the "death" of God YHWH (Allah), due to science. This means that mythology is currently not enough to explain the Universe as we know it.

Finn thought the "death of God" is the problem of modernity because it leads to an existential crisis and to a loss of a belief in someone supernatural who can help us. Nietzsche's solution to the problem of modernity is that we become Übermenschen. Finn said that fascism and neoliberalism were attempts that failed to solve the problem of modernity. He said the ancient Greek aristocrats found the kind of solution that can be applied in modern times to solve the problem of modernity because they became genuine Übermenschen. For Finn, this means having strong bodies, educated minds, and the will to be powerful warriors. Unlike Emilio the

Sage, Finn did not think the Übermensch should be a miraculous saint or mage. Finn thought aristocratic Greeks were an excellent society until sophist Socrates the Elder ruined it by showing they were just ignorant fools who falsely imagined that they were wise. Finn thought Socrates ought to be refuted, so Übermenschen can return to this world. According to Finn, Übermenschen cannot exist without reevaluating all values. Finn agreed with Nietzsche that the philosopher is a person who is responsible for the whole development of humanity. Finn wrote that he would become a philosophical Übermensch by becoming the man who would change the destiny of all humankind, creating a new Nietzschean philosophy that would solve the problem of modernity.

On the cover of his thesis, Finn drew himself with a terrestrial globe teaching philosophy to Jesus, to prophet Moses, to Galilei, to Voltaire, to Rousseau, to Von Goethe, to Nietzsche, to Bacon, to Polykleitos, and to Winckelmann. All Finn's students on his cover were great men, as Carlyle (1841) would say in his book titled "On Heroes, Hero-Worship, & the Heroic in History." Finn's professors at the university were utterly shocked! They thought Finn's work was blasphemous, subversive, scary, and dangerous. As a punishment for having written such an essay, he failed. They told him that he should submit a totally different thesis on a different topic. He decided to drop out and start a new bachelor's degree. Finn ended up studying for an undergraduate degree in engineering. I think his professors did to him the same that was done to philosopher Spinoza when he was excommunicated in the 17th century for thinking differently. But unlike Spinoza, Finn was dissuaded from being the promising young thinker he was. I do not know exactly why Finn's professors disliked his thesis, but I suppose that they thought that for there to be an Übermensch, other men should be labeled as less than him. After all, how can a man be superior if there are no other men inferior to him?

Following Finn's analogy of the ancient Greek citizens of the city-states of old as Übermenschen, they indeed thought slave peasants were inferior to them. However, it might be that Finn did not think there should be a society comprised of citizens and slaves. It might be that he thought all of us modern men are the inferior men and that all the men of his future utopian civilization would be the Übermenschen. Strangely, Finn did not speak about the Überfrau, the female equivalent of the Übermensch. Finn did not think about women. All his friends were men. Once he even said to his friends that philosophy was his girlfriend. This very strange idea reminds me of the nuns who claimed to be married to Jesus, or of the witch trials where some women confessed under torture to having married the Devil.

The best part of Finn's cover was that the legs of the floor-standing globe looked like lion (*Panthera leo*) paws! That globe reminded me of the lion-footed bathtubs that can be found in some hotels! I am surprised that undergraduate students at Uppsala Universitet are allowed to add fanciful covers to their theses. This did not happen at the University of Edinburgh. Only an image of the coat of arms of the University of Edinburgh is shown on what would be the cover of a thesis written there. As the coat of arms depicts a spear thistle (*Cirsium vulgare*), I decided to add an illustration of this plant made by Albino Adelaido Luna before my own undergraduate dissertation in this book (**page 743**). To read my dissertation, please see Appendix G. Unlike Finn's, my dissertation is not meant to change humankind!

Finn told me that he still daydreamed that one day his views would be spread in a secret way that would help to create a New World Order. It would be like the Rosicrucian manifestos that were widely read in the 17th century, but no one knew who authored them. When Finn listened to me preaching the teachings of Jana the Refulgent and he saw all the philosophical knowledge that I had thanks to my daily philosophical study, he decided to spend time with me. In the following months, each week for one afternoon, Finn went to visit me at BMC to talk about philosophy, science, and metaphysics. We always talked in the Restaurang Bikupan, the BMC restaurant (59.84222747827005, 17.63412103524109). Such conversations were marvelous. We learned a lot. My conversations with Finn were very different from my conversations that I had when I was a teenager with my teachers Emilio the Sage and Jana the Refulgent. On the one hand, my conversations with Emilio the Sage and Jana the Refulgent were less complex and more useful for daily life. On the other hand, my conversations with Finn were very academic and quite useless for daily life. Nonetheless, our conversations made me feel very happy.

Finn thought Plato was right when, in his dialogue "The Republic," he stated that society should be ruled by philosopher kings. According to Finn, the modern equivalent to ancient philosophers would be the scientists and engineers. I think this means Finn wanted society to be a technocracy such as the one suggested by Henri de Saint-Simon (1817) in his book titled "L'Industrie." Moreover, Finn wanted there to be a new renaissance in Western civilization by adopting the aesthetic and moral values of the ancient Greek Athenian democracy, as was suggested by Francesco Petrarch in the 14th century in his collection of letters titled "Rerum Senilium Libri." Finn considered that modern philosophy was undergoing a cultural decline. He thought modern philosophy must be

reformed because instead of solving the greatest problems of the world, modern philosophers are only engaged in analyzing language. This was the so-called linguistic turn. The best example of what Finn denounced as the cultural decline of philosophy was the views of Ludwig Wittgenstein (1921) regarding language, which were discussed in a paper titled "Logisch-Philosophische Abhandlung" that was published in "Annalen der Naturphilosophie" 14: 185–262.

Finn said that in the "Iliad," the good guys are the Trojans (Wilusans), and the bad guys are the Achaeans (Greeks). He also said that the Trojan War was the origin of Greek culture because it was an event that gathered everything that was important at that time. All the Deities were interested in the same war. All the most excellent men (Übermenschen) gathered to fight in the same war. Finn claimed our modern civilization lacks a foundation myth of such magnitude and that we urgently need one. Finn spent many hours in art museums sketching ancient Greek and Roman marble sculptures that depicted naked, muscular men. He wanted to reconstruct the physique of the ancient Übermenschen. Finn had too many hypermasculine fantasies.

There is a molecule known as bisphenol A (BPA) that is used to make plastic containers for food and beverages. At the beginning of the 21st century, it was shown that it can lead to an increase of adipose tissue in rats (*Rattus norvegicus*). You can read this in the paper by Rubin et al. (2001) that is titled "Perinatal Exposure to Low Doses of Bisphenol A Affects Body Weight, Patterns of Estrous Cyclicity, and Plasma LH Levels." It was published in "Environmental Health Perspectives" 109(7): 675–680. This result popularized studies that linked BPA and obesity. A lady who was a professor of medicine at Uppsala Universitet as part of her study that linked BPA and obesity wanted to demonstrate that the same happened with polyethylene terephthalate (PET), the material that is used to make almost all plastic bottles. In that way, she thought she would become famous by starting a worldwide controversy. This professor who wanted to be famous was the boss of Madame Klockars. To test what the professor wanted, Madame Klockars worked watering rats of one group with PET bottles. The rats of another group were watered using glass bottles. Both groups had the same diet. The rats of both groups got equally fat.

The professor who wanted to be famous was enraged because she said that Madame Klockars had to show that PET did not allow animals to keep a healthy body weight. That is why the professor who wanted to be famous ordered Madame Klockars to prove her hypothesis with flies that belong to the species *Drosophila melanogaster*. That is why Madame Klockars ended up working

for Professor Williams, who was a *Drosophila melanogaster* breeder. The flies who ate Jazz-mix *Drosophila* food inside PET containers did not get fatter. Both groups got equally fat. Jayasimman mocked Madame Klockars because she was attempting to show that drinking beverages kept inside PET bottles is bad for our health, and at the same time, every day, she bought from the ICA store a large Coca-Cola bottle made of PET to drink from.

The professor who wanted to be famous was furious because the *Drosophila melanogaster* did not get fat. As the professor who wanted to be famous hassled Professor Williams a lot, he took revenge on his subordinates by being angry with us for almost no reason. As Madame Klockars and I were under too much stress, we were angry and sad all the time. We felt deeply frustrated. Our lives stopped being pleasant. The professor who wanted to be famous wanted to force nature to behave as she wanted. She wanted us to show that PET made rats and flies grow fat, but the rats and the flies did not get fat as she wanted. What could Madame Klockars and I do? In this third laboratory, after having experienced the labs of the narcissist professor at the University of Edinburgh, and the lab of the pineapple-eating lady at Uppsala Universitet, I realized that I did not like the social environment of scientific research labs. It is not for me. It is not beneficial for me. It entails too much stress and too much workload.

Jurisprudence

After being spiritually destroyed by Birgitta the First, I rebuilt my spirit with dialectics, wisdom, and philosophical analysis. By doing this, I became a true philosopher. This is because my previous way of life and behavior was destroyed to turn into a new life based on principles that were rationally evaluated by myself. From the point of view of Jana the Refulgent, it is through continuous, gradual, and conscientious endeavors that great changes are achieved in our lives. Following her golden methods, I performed my dialectical reflections in a step-by-step fashion for 24 weeks. I reflected on who I was, what I wanted in life, and how I should behave. I did this until I had enough power to rebuild myself. This was not to rebuild myself in a way that I would again be the same person who in the second half of 2005 met Birgitta the First, but to rebuild me as a new being that would be mindful of the grim evils of this world and that would be totally ready to face Birgitta the Second, my greatest fright in life.

In Mariana's online chat, I started talking about something. Then Mariana asked me about topics or matters that she found appealing regarding what I was saying. I answered her by analyzing such ideas using

the ideas of Emilio the Sage. During my 24 Uppsala dialectical reflections, I did the same, but only with such events or topics that made me feel upset or angry during the time I was living in Uppsala. At the time I was living in Uppsala, my analysis was more focused on the ideas of Jana the Refulgent, but the method was the same.

I realized that by analyzing what made me feel upset using the doctrine of Jana the Refulgent, such ills did not seem as dire as before. I also noticed that many times, such ideas that made me feel upset were not anything more than nonsense that Birgitta the First created with her systematic abuse. My new philosophy was a defense against the negative ideas that malicious people use to make their victims feel sad or infuriated. My new philosophy was a sort of antidote against the most usual tricks that are used to subdue an individual. In this respect, Birgitta the First was not special. Many people who engage in domestic violence use the same techniques. Therefore, the optimist worldview of Jana the Refulgent that made me feel a lot of self-love was the antidote that I needed against the malevolence of a possible Birgitta the Second.

When someone tells us something to emotionally hurt us, what we need to do is to run away from that person. However, that does not solve all problems, as such people harm us with hurtful arguments. These arguments are the reasonings that verbally abusive people use to make us feel miserable or to subdue us. Even if we leave the abusive person, these ideas might keep hurting us. Even just the ideas of evil people can damage us when they are introduced in our minds. The solution is learning formal logic and informal logic to analyze such words and then stop believing in them. Hence, we need the philosophical tools to demonstrate the unsoundness, invalidity, weakness, or how uncogent these arguments are. In that way, we can get rid of such nasty ideas.

Asia the Mystic believed that evil cannot be fought with evil, because evil only makes evil more powerful; it does not stop it. It is by means of virtuousness that evil must be fought. The Islamophobic scientistic antitheist bigots of the United States of America and Europe that lived at the beginning of the 21st century wanted to fight terrorism by using racism and intolerance against all Arabs and Muslims. But this strategy did not stop evil, it only made the world a worse place to live in. The Islamophobic malevolent people wanted to create a Western world where racial prejudices were socially accepted. They wanted there to be a similar situation to what happened in Nazi Germany. Fortunately, their mistaken way of thinking of course did not allow them to achieve their baneful aims.

Considering the “History of Animals” by Aristotle as my favorite book showed that I

was achieving a remarkable spiritual illumination with respect to how I was before 2011. Before 2011, I would have been fan of a book that would be all about science, or of a book that would be entirely spiritual, or of a fictitious novel. Nevertheless, in 2011, my favorite book was a text that combined all parts of humanity. The empirical and scientific part of this book is in the study of ecology and non-human animal behavior. The spiritual part of this book is in the search for philosophical answers to questions. These questions are based on carefully observing the natural world. The fantasy part of this book is in the monsters that Ctesias described in his book "Indica," such as the unicorn and the mantichora. In this way, I followed the commandment that Jana the Refulgent gave me the day she told me that she would not be my teacher anymore because she could not teach me more. The commandment that she gave me was that I should learn about absolutely all the disciplines that involve human knowledge and that I should equally love them. My love for my new favorite book showed my new interest in knowing about everything.

According to Asia the Mystic, a sinner is someone who acts badly. Asia the Mystic thought that there is no way sinners may behave well, if such sinners openly repent for the sinful lives they led but at the same time do not live according to good moral standards. Thus, Peter Raven should have tried to eat less if he was an environmentalist and truly believed that an excess of food consumption by people of wealthy countries damages the environment. After all, how is it possible that rich people who are overweight and who live in wealthy countries would believe that it is possible to live eating less nutrients, if the guy who is preaching this doctrine cannot consistently live following his own beliefs? Would they believe by looking at the photographs of the poor malnourished African farmers that Raven showed in the lecture hall at the Melbourne Convention and Exhibition Center?

When Jana the Refulgent got the postcard that I sent to her from Melbourne, she congratulated me for everything that I was doing in the nomenclature section of the international botanical congress. Everything that I was doing was according to her teachings, as I was fearlessly talking in public without any concern for what the other persons at the lecture hall of the University of Melbourne would think about me. Finally, even if my suggestion that the description of new plant species should be written in Latin was less popular, many persons approached me after the sessions ended to tell me that I was right. Nonetheless, they did not dare to vote against the motion to suppress the compulsory Latin descriptions because they feared that the other plant scientists would have a bad opinion of them for not thinking

like the majority. I was different to them. I was ready to go against what most people believed, as I was trained to do by following the teachings of Jana the Refulgent. We should not forget that Jana the Refulgent went against what most people wanted in life. Most people love to live a dissolute life. On the other hand, Jana the Refulgent and I loved living with discipline and hard work. This of course does not have anything to do with using Latin to describe new species of plants, but in this case, I was used to being proud of my ideas and to publicly proclaiming them, even if they went against what most people want in life.

According to Asia the Mystic, the soul is a property that gives life to matter. She thought that the only way to remove a soul from a human body would be killing the person or if the person would die due to an accident, an illness, or old age. She believed that it was impossible to keep a human body alive and with no soul at the same time. It would be a contradiction as absurd as a married bachelor. However, Georgina Reyes and her mother Esperanza believed that it is possible that a person would be alive, and that at the same time the soul of that patient would have been stolen by a necromancer or by a spirit. This is inconsistent! The reason is that we use the word "soul" to refer to such metaphysical essence that gives the property of life. If something is alive but it lacks a soul, then it means that the word "soul" does not refer to the metaphysical essence of all living things. The problem with this instance is that in this case, the word "soul" loses any possible meaning that it can have because something that is alive can be defined as not having a soul. If this happens, there is not even any reason for the word "soul" to exist, as it would stop being useful to define something that exists. The way in which Esperanza and her daughter attempted to cure someone who supposedly lost the soul was also bizarre. For this, they used the following plant species: *Schinus molle*, *Ruta chalepensis*, *Ocimum basilicum*, and *Salvia rosmarinus*. None of the molecules produced by these plants were drunk or in any other way ingested or inhaled by the patient, but they still thought they could psychically return the soul to the body.

The young woman who ate the pineapple (*Ananas comosus*) who was my supervisor should not work as a scientist. According to Jana the Refulgent, being a scientist must be a calling based on an interest in knowing the Universe and its laws, a calling that originates from the intellectual pleasure that we feel by performing this activity. The pineapple-eating lady was always wrathful and furious. This clearly showed that she did not feel good doing the work she was doing. Jana the Refulgent thought that if we dislike something or if it does not give us what we were looking for, we ought to leave it. The reason is that ourselves and our welfare are always more important. If the

lady of the pineapple would have behaved by loving herself, she would have stopped studying human astrocytes, as such work obviously made her feel miserable.

Jana the Refulgent thought that wisdom not only ennobles us, but that it is also a tool to face all the evils of this world that might stalk us. She was right because if the lady of the pineapple would have studied the bacteria that contaminated the cell cultures, she would not have imagined stupid hypotheses such as thinking that wearing shoes would cause bacterial contamination in cell cultures. Many solutions to our problems already exist. Even when sometimes these problems seem impossible to solve. Nevertheless, our ignorance does not allow us to notice that solutions already exist. That is why the best battle preparation is wisdom. It does not matter the size of our opponent—it might be that our opponents are tiny such as bacteria that belong to the species *Metamycoplasma orale*, or that our opponents have the same size as us, such as Birgitta the Second. Regardless of the size, wisdom is our key to facing any battle.

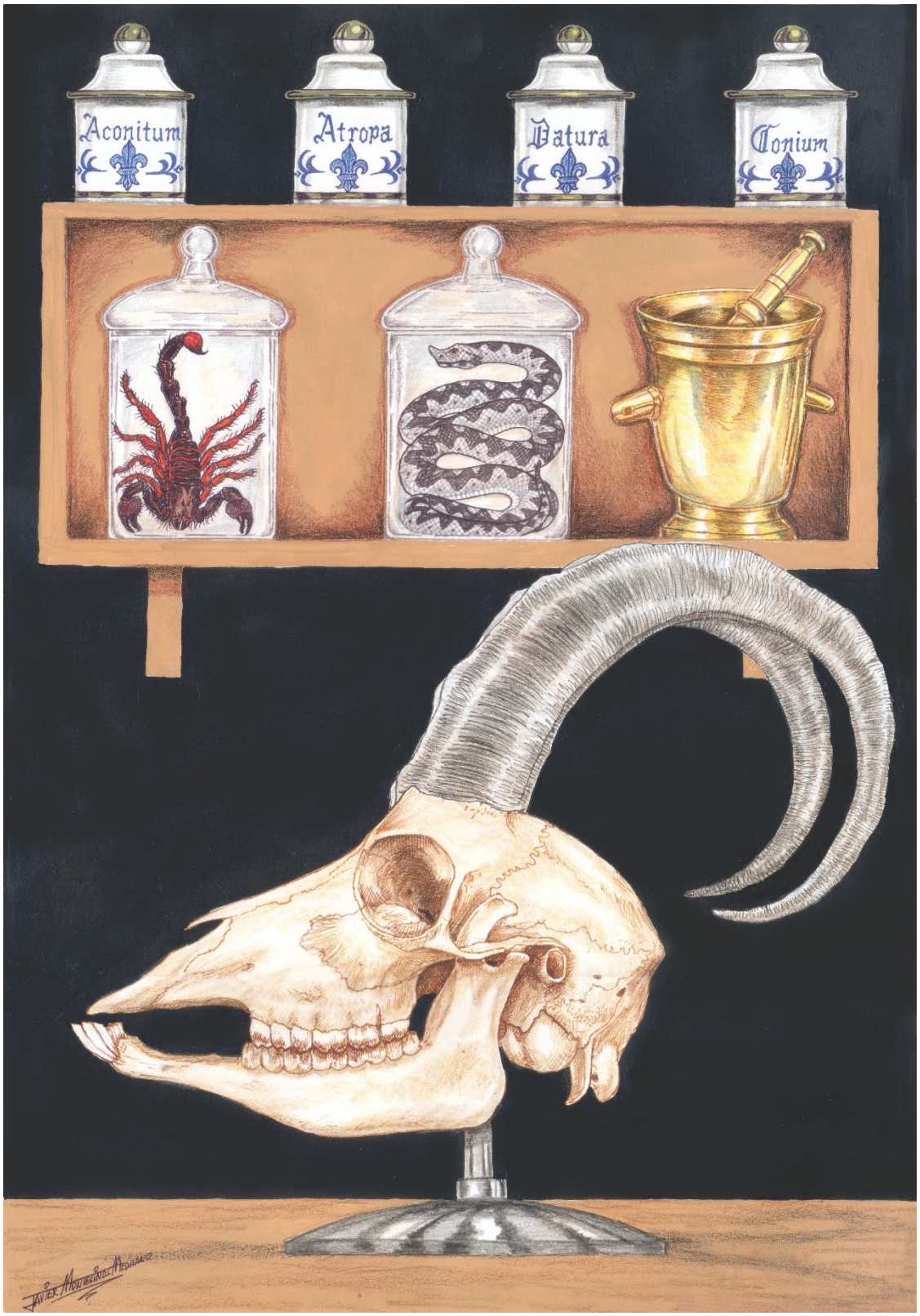
According to Jana the Refulgent, the scientific method entails observing a natural phenomenon. After that, to devise a hypothesis, and then attempt to falsify the hypothesis. After this, to derive a conclusion that is published so other people may want to replicate it. Yet, for the professor who wanted to be famous, the scientific method was more like Scholastic medieval philosophy. She thought that firstly, the principal investigator generates a conclusion that is a faith-based dogma. As it cannot possibly be false, it necessarily needs to happen in nature. After this, the principal investigator orders her postdocs or students to show by any means necessary that what their boss said is true. Finally, nature needs to follow the faith-based dogmas of the principal investigator, by making sure that what she imagined would be truthful. The scientific method of the professor who wanted to be famous seems to me the worst of all self-delusions. That is because nature follows laws that are independent of the cognitions devised by human minds. It is indeed true that we can uncover such laws, but it does not mean that if we wish for something, nature will change to fulfill our wish. Even divine miracles happen following the laws of nature. There are universal principles that are unbreakable. This is not because it is wrong to break such laws, but because no one has the power to break them.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 25. *CAPRA HIRCUS*

It was 7:00 AM on Sunday. As almost no one works during that day in Christian countries, because Sunday is the "Christian sabbath," there were almost no people in the square known as Rynek Główny, but I was waiting to meet the sorceress. I was at the entrance of the Bazylika Mariacka, the Catholic church in the city center of Kraków, Poland. The theurgist that I was awaiting arrived. I hugged her and kissed her. We spent most of the day together, so the early appointment was not because she had something else to do later. She was just used to waking up early every day. That is how Asia the Mystic was. I went to visit her in her country. It was important for me to talk to her. The topic I wanted to discuss was something that I would not discuss with Tove, Gabrielė Indrišiūnaitė, or Finn. The reason is that none of them claimed to see the future, but Asia the Mystic did claim to be a prophetess. I had spent lots of years getting prepared to become a scientific researcher, but I found out that I did not like working in labs. Specifically, I did not like the kind of people who worked in labs and how they behaved. I asked Asia the Mystic whether it was advisable to leave that kind of life. Asia the Mystic said to me that my path as a PhD student and then postdoc would not be the right one for me, that if I wanted to perform my sacred mission in life, I should work independently by myself, not working for a principal investigator. Asia the Mystic added that amongst all paths that we can follow, we all could have a mission to fulfill in life that would lead us closer to our true divine human form, and that my sacred mission was outside of academia. This mission is not necessarily something related to religion or spirituality. It is not necessarily what we want to accomplish in life. It is not necessarily what would make us happier. It is not necessarily what would be best for us. It is not even necessarily what would generate the best version of us according to the most ubiquitously held cultural standards. It has nothing to do with the self-seeking impulses suggested by William James (1890) in his "Principles of Psychology" or with the search for individuation suggested by Carl Jung (1928) in "Die Beziehungen Zwischen dem Ich und dem Unbewussten." The sacred mission is an unfathomable decision made by Heaven. It is not our task to discover it; it is allocated to us. She added that something that happens in modern society is that people follow the ideas of the existentialists and think that they should personally choose their mission in life or find it by themselves. But instead, they could simply choose to hear the divine voice and follow the path that is closer to their true divine nature.



***Capra hircus* Linnaeus, 1758 (Artiodactyla: Bovidae)**

Illustration made by Javier Montesinos Medrano. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 863.**

However, modern people are so disconnected from divinity that they do not want to listen to that voice, or they even deny that it exists. Moreover, as they are so self-obsessed, they always want a mission that involves their personal fulfillment, not one that comes from outside of them and whose aim they might ignore. Asia the Mystic said that that is the difference between a holy person and an average human. An average human wants personal fulfillment. A holy person wants to fulfill the sayings of the divine voice, even if the holy person would not understand their mysterious aims. Asia the Mystic said modern institutions, even churches, do not teach you to be a holy person because it is not economically profitable for them. But the fact that people do not want to listen to that idea does not mean it is wrong.

Therefore, Asia the Mystic told me that I should not worry; my future was in the hands of Heaven. I would not need to feel anxious about making my own decisions. If I wanted, all of them would be decided by Heaven. To get these divine revelations, I would just need to practice my prophetic abilities that, as Asia the Mystic claimed, were my mystical experiences. Asia the Mystic said that this does not mean that people who decide not to listen to the divine voice are acting against God YHWH (Allah), because this Deity Himself gave humans the power to choose different paths in life. In fact, Asia the Mystic thought all such choices that we end up selecting are within the plan of the Deity. So, I would always be free to listen to the divine voice or not, but if I wanted, it would give me a special sacred mission to follow. I could choose to take such an offer but not immediately. I had as much time as I wanted to think about that.

It is indeed true that Asia the Mystic believed that Renaissance philosopher Giovanni Pico della Mirandola was right when he claimed that God YHWH allowed humans to be whatever they wanted to be, because such a belief is indicative, which means that it only states a fact. Yet, she did not believe in writer François Rabelais, when he wrote his famous quote: “Do what thou wilt,” because such belief is normative, which means it is telling you what to do. According to Asia the Mystic, the fact that humans can choose whatever they want to do in life does not mean there is not a best possible choice. According to her, what every reasonable human ought to do is to follow the sacred mission before anything else. She thought all human decisions are ultimately what the Deity wants for such person, but the Deity does not love all the paths that He assigns equally, and listening to the divine voice is the most perfect path from the Deity’s point of view. You can read the opinion of Pico della Mirandola (1496) in his essay titled “De Hominis Dignitates” in “Commentationes.” You can read the story of the Abbey of Thélème in the novel

by Rabelais (1534) titled “La Vie Très Horrifique du Grand Gargantua, Père de Pantagruel.”

Asia the Mystic agreed with medieval physician Avicenna, who claimed that from the point of view of God YHWH, the best humans are the ones who can listen to the divine voice and see the holy angels. Asia the Mystic said that by using my mystical experiences purposefully, I could directly contact the divine without the need for any church, any institution established by humans, or even any other humans whatsoever. In that way, the opinion of no human, not even my own opinion, would influence the divine messages that I would receive in visions. That is good to get rid of the pernicious influence of fashions and politics. Fashions and political ideologies die with the people who believe in them. As philosopher Marsilio Ficino said, true philosophy is eternal.

If you want to know the opinion of Avicenna (1027) stated here, please read his “Book of Healing.” If you want to know more about the ideas of Ficino (1474) regarding the prisca theologia, please read his book titled “De Christiana Religione.”

That day, I talked to Asia the Mystic about my Grand Tour and everything that I saw there. She said to me it would be equally good that I would travel through biblical lands, as plenty of Western culture is not just Graeco-Roman, but also Abrahamic. In his “Prescriptions Against Heretics,” ancient Christian theologian Tertullian rhetorically questioned himself: “What does Athens have to do with Jerusalem?” I think I could rephrase this question as: “What does the Western culture have to do with the pre-Islamic Middle East?” As an answer, I could state that the extremely influential “Bible” is not the only thing to come from the Middle East. Also, the origin of Western civilization itself happened in Mesopotamia and Egypt, as many of their innovations were later adopted by Mediterranean Europeans. So, Asia the Mystic convinced me, and I decided to make a Second Pilgrimage, this time to the Holy Land!

Asia the Mystic was very idiosyncratic. She was clearly a Christian religious person, but she did not behave as an average Christian. For example, when we ate together, Asia blessed the food as Christians of past times did, but she did not pray in front of it, she just said her wish out loud in front of the food. Asia said that she lived life differently to other people because she did not want to buy lots of stuff. She did not own a lot of objects, just the essential ones to live life. She did not eat a lot of food either, only food that she needed. She never ate to fulfill a wish to eat something tasty for the sake of the pleasure involved in eating tasty food. Strangely, she was one of the happiest humans I have ever met. She was always smiling, laughing, and being euphoric. I think this is strange because most people

think living the sort of life that Asia the Mystic lived would not lead to happiness.

In Sweden, during Christmas time, a gigantic sculpture is built in the town of Gävle. It is taller than a three-story building. It is a goat (*Capra hircus*) made of wheat (*Triticum aestivum*) straw. I went to see it and I was very impressed by it. In the 2000s and 2010s, vandal arsonists burnt the goat almost every year, even if that was not its raison d'être. This goat is made every year on Advent Sunday, the first day of the Western Christian liturgical year. In Sweden, goats are Christmas symbols. A Swedish classmate told me that the Yule goat is a ghostly creature that is scary but that it also delivers gifts.

During the time of the Roman Empire, pagan emperors thought that Christianity was a threat to political stability. Hence, there were persecutions of Christians and many of them underwent martyrdom. One of these martyrs was St. Lucy. She consecrated her virginity to God YHWH. Nevertheless, a pagan wanted to marry her, even if she did not want to marry him. As he knew she did not want to marry him because she was a Christian, he decided to denounce her to the government of the Roman Empire. As a punishment for being Christian, she was sentenced to be sold to a brothel so she would be forced to work there as a prostitute. When the law enforcement officers attempted to arrest her, she became so heavy that they were not able to move her body. This was a miracle. As she could not be sent to the bordello, they decided to kill her.

In this story, apparently, preserving the virginity of St. Lucy was more important than preserving her life. St. Lucy is usually depicted in artworks with her eyes inside a container. This is because according to old legends, either the law enforcement officers or she herself plucked out her eyes. She is also depicted holding a palm leaf (*Phoenix theophrasti*). This is because according to ancient Christians, a martyr was a champion that defeated temptation. That is why the palm of victory was awarded to martyrs in art. In real life, the palm of victory was a trophy that was awarded to athletes who won sports championships in the pagan Olympian religion. The palm of victory reminds us of the palm in Delos under which God Apollo was born. That is why the Delian League used it as a symbol, and it ended up meaning the victory in war of the Delian League over the Achaemenid Persian Empire. That is how this palm leaf became a symbol of victory.

On the 13th of December, St. Lucy's death anniversary, the Swedes perform a magnificent ritual where people dress up with costumes. These people sing carols. I went to see this ritual at the Uppsala Cathedral. The most important character of this ritual is a girl that is supposed to be St. Lucy. She is dressed in white and a crown with lit candles is placed over her head. The

girl that is dressed up as St. Lucy is followed by plenty of girls in white that hold candles in their hands. She is also followed by boys in white wearing conical hats and carrying sticks that look like magical wands. In the Stockholm Historiska Museet, a history museum, there is a real-life magical wand made of metal. It was found buried inside the tomb of a Viking priestess. Magical wands were part of Norse religion, not Christianity. Nonetheless, they have been adopted by modern Swedish Christians in the ritual of St. Lucy. The Historiska Museet is a beautiful museum because it has an extremely extensive collection of objects made of gold that were made by virtuosi goldsmiths in old times.

On Saturday the 31st of December 2011, I decided that professionally working as a scientific researcher on a salaried basis was not suitable for me. Thus, I submitted a resignation letter to Madame Klockars who, as I wrote previously, was a good person. I have a lot of respect for her. Since then, science would just become my pastime. I left the Uppsala Universitet without getting a master's degree. After I left, Madame Klockars and Professor Williams (2012) complained about the whims of the professor who wanted to be famous in a paper titled "Scientific yellow journalism." It was published in "Small GTPases" 3(4): 201. In this rant, they basically stated that such types of works were absurd. After this, they kept researching the link between bisphenol A (BPA) and obesity. They of course forgot about the polyethylene terephthalate (PET) that, according to their boss, would make them famous.

In 1996, a group of psychologists wrote a research paper that showed that when people are exposed to unconscious stimuli related to old age, they tend to walk slower, behaving a little bit as if they were elderly people. This paper by Bargh et al. (1996) was titled "Automaticity of Social Behavior: direct effects of trait construct and stereotype-activation on action." It was published in the "Journal of Personality and Social Psychology" 71: 230–244. This became a groundbreaking study that unleashed other similar research and ended up being reported in textbooks. Unfortunately, a paper that refuted the 1996 paper was published. The 1996 study was impossible to replicate. This influential paper by Doyen et al. (2012) was titled: "Behavioral Priming: it's all in the mind, but whose mind?" It was published in "PLoS One" 7(1): e29081. This was the beginning of something horrible that started to happen from that moment onward. In later years, it was realized that around half of all psychological results could not be replicated when other researchers attempted to perform these experiments. This means half of psychology was unreliable. Fortunately, these replication studies showed us what was wrong and what was not. The replication crisis was an existential crisis for

Western culture, as a lot of guidelines about how to live life and concepts related to health and illness are based on psychology. The replication crisis was like a "second death of God."

Finn told me that he read the book by St. Severinus Boethius (524) titled "On the Consolation of Philosophy." Finn was upset after reading the book. He said he did not believe in God YHWH. St. Severinus Boethius's book was all about YHWH and religion. Finn said that reading such a book was a waste of time and that he felt like a fool for having read it. He asked me to deliver a speech to him so he would not feel so bad. I told him that this book was not a waste of time, that he does not need to believe in a whole text for it to be useful for him. I told him to build his worldview out of tiny bits from everything that he would read. Some tiny bits from St. Severinus Boethius's book could be useful. He should be inspired by them, even if not by the whole of it.

Furthermore, by purposefully avoiding certain genres, he was avoiding certain philosophical gems hidden amongst what he did not believe. The authors of the books that he fancied very likely were purposefully avoiding literature different to their worldview as well, and thus would never write about the hidden gems in their books. By reading about topics he disliked, Finn would avoid what is now known as literary "epistemic bubbles" and "echo chambers."

It is good to avoid these epistemic traps because it is always better to know more than less. At least that is what Jana the Refulgent told me to do as my aim in life. This opinion may sound fallacious, like an argument from authority. If I would not have written the previous chapters, it would indeed be an informal fallacy, but in the previous chapters, you can read Jana's premises on why knowledge is better than ignorance.

I left Sweden in March 2012. Until then, I traveled around Norway, Denmark, and Sweden. I slept one night in the famous ice hotel of Jukkasjärvi. All of it is made of ice, and in the suites, there are beautiful sculptures made of ice. That hotel melts every spring. It is built again every winter. It has a Christian chapel where people marry. It is dedicated every year by a minister of the Lutheran Church of Sweden every time the hotel is built, and every year, a ritual is performed to remove its sacredness before it melts. I was there on Sunday the 29th of January 2012. That night I saw the majestic northern lights. The next day I rode a sleigh pulled by a reindeer (*Rangifer tarandus*).

One of the places that I wanted to visit in my Second Pilgrimage was the historic city center of Alexandria. It sank under the Mediterranean Sea in 365. To go there, I needed to learn how to scuba dive. Before doing that, I wanted to learn to swim well, so I took swimming lessons in Stockholm, Sweden.

As I had plenty of free time, I wanted to experience a different way of bird watching. I took a birding tour that lasted several days. The tourist guide was Daniel Green. This is the most usual type of birding experience for many birdwatchers when they travel to a different place where they do not live. To be frank, one loses half of the fun with these types of birding holidays. The reason is that one does not experience the previous research to know where to find the bird. Furthermore, one does not have the fun and satisfaction of finding it by oneself. Everything is already solved so one can see it. Birding by oneself is like cooking your own food. Going birding with a tourist guide is like going to a restaurant. During that birding holiday, I reached my peak level of addiction around my life list of birds. This is because I was going nuts, because it seemed we would not see the birds that motivated me to take the tour in the first place. They were some woodpeckers (*Dendrocopos leucotos* & *Picus canus*) and a nutcracker (*Nucifraga caryocatactes*). However, we finally did see them during that tour.

At that time, I started to question the style of birding that was practiced by Phoebe Snetsinger, whose book I read eight years before. That tour allowed me to realize that it is not important to have many names of seen birds in a list. What is important is the Epicurean pleasure that these birds made me feel. If such pleasure is not felt anymore, the technique used for birding must be changed. I think that being so obsessed with bird lists does not allow us to enjoy the birds that are closer to us and that are easy to spot, because we are too focused on what we have not seen yet. Sometimes, it even makes us feel uncomfortable because it pushes us to think about what we still have not found, and we want to see such species.

I was indeed going to keep listing birds, but I would stop prioritizing that in my field trips. As an additional conclusion to this idea, I can state that watching birds to preserve the environment or planet Earth is an incorrect method of practicing this hobby. This is because it is very easy to suffer by thinking about the environmental degradation caused by humans. By doing this, birding stops being pleasurable. One must be as anthropocentric and as individualistic as Jana the Refulgent, even in birdwatching matters. If birding leads to anxiousness or despair due to environmental issues, it is always better to stop doing it and to engage in another pastime that produces more pleasure.

On, this tour I met a very old English gentleman who was also a tourist. He was a military officer that fought as part of the Allied troops that landed in Normandy, France during the so-called D-Day. At that time, the land was being occupied by the Nazis. He told me about his experiences during World War II. I will never forget that Swedish birding tour because on Friday the 17th of February 2012, I saw two parhelia at

each side of the Sun. I saw them in Fläckebo, Västmanland. These sundogs are shining lights that look the same as the Sun. They are located on either side of the Sun, so it seems as if there are three suns in the sky at the same time. The sundogs are not real objects, but optical phenomena due to the ice crystals found in the atmosphere.

There was something interesting about Sweden that happened while I was living there. It was the design of the 100 SEK banknotes. The portrait of Linnaeus was shown there. Close to him, there were illustrations from his thesis titled "Praeludia Sponsaliorum Plantarum" (1729) and an aerial view of the Linnéträdgården, the botanical garden where Linnaeus worked. On the back of the banknote was an image of a honeybee (*Apis mellifera*) feeding from the nectar of a flower (*Geranium sylvaticum*). These banknotes were part of the last generation of banknotes that were widely used in Sweden. After this generation of banknotes stopped being issued, people started to substitute cash with electronic payments, credit cards, or debit cards. Banknotes became a rarity. In this way, the Swedish government attempted to have absolute control over the economy. By doing this, they minimized the informal economy.

The botanical garden that was shown in the 100 SEK banknotes is the old botanical garden of the Uppsala Universitet. Linnaeus once was the director of that garden. In modern times, the garden looks the same as how Linnaeus designed it. Most of the plants in the garden are herbs, and some of them have good-looking flowers. All of them belong to the species that Linnaeus kept there when he was alive. In the garden, there is a pond where there are smooth newts (*Lissotriton vulgaris*). These are tiny salamanders. In another pond that simply contains perpetually wet soil, one can see the herb *Linnaea borealis* that was named after the great Linnaeus by Gronovius. This is according to Linnaeus (1737) in his book "Genera Plantarum." The herbs of the Linnéträdgården are displayed in groups according to Linnaeus's sexual system, an artificial classification that divides angiosperm plants according to their number of stamens and carpels. This system was controversial when it was first published because sexuality was considered pornographic. In the garden, there is a sculpture that Linnaeus placed there. It is a copy of the "Venus de' Medici." It is a statue of the Graeco-Roman Goddess of love and sexuality.

She is very likely a reference to Linnaeus's sexual system. This statue was also very controversial because it depicts a totally naked young maiden. This shocked 18th-century people at the time when Linnaeus was alive. Nevertheless, it was less shocking for them than the sexual system of classification of angiosperm plants.

I went to the zoology museum of the Københavns Universitet in Copenhagen, Denmark. I did not go to see the exhibition that is open to the public. I went to visit the ornithological collections that are only open to researchers. I wanted to see a legendary relic being kept in this museum. I was not just able to see it, but also to touch it with my hands. All the zoomorphic Egyptian Gods are based on non-human animal species. The Phoenix (Bennu) is the spirit (ba) bird of the Sun God. It is based on a species of bird that no one amongst the modern people knew until some archeologists found the remains of a gigantic bird in the United Arab Emirates. This bird would look like a Phoenix if it were alive: This bird was christened as *Ardea bennuides*.

I asked to see its tibiotarsus. As I held it in my hands, I felt proud of having touched one of the bones of such a legendary beast. Pre-Socratic philosopher Thales of Miletus is said to have been in Egypt. Thales said that everything comes from water, and that the dry land that we inhabit floats over water. This is an ancient Egyptian religious belief, as in this belief system, everything came from the Nun (primordial waters), and the dry land floats above them. In ancient Egyptian religion, when the mound of creation appeared over the Nun, a water bird brought light over the newly created Universe. That bird was the Phoenix. In Chapter 17 of the "Book of Coming Forth by Day," popularly known as the "Book of the Dead," it is said that the Phoenix is a symbol of Osiris the Khenti-Amentiu when he was a corpse before His resurrection (**page 847**). Pope St. Clement I of Rome in his Christian "First Epistle" says that the Phoenix is a symbol of Jesus when he died and resurrected.

I finished photographing all the type specimens of Mexican microlepidoptera that were kept in the Natural History Museum, London. All the entomologists of the museum together with their collections were moved from Wandsworth to South Kensington, the main museum headquarters. They built there a new building known as the Cocoon (51.49641232566831, -0.1777889179981483). All the entomologists and their insects were housed there. This new building had a very modern style of architecture and lots of facilities to keep all the collections.

I said goodbye to the great Kevin Tuck, who was going to retire soon. Even if all the facilities of the Cocoon are quite good for keeping the specimens in perfect condition, I think its architecture is not as beautiful as the oldest parts of the museum. Maybe it is difficult to find an architect that makes stunning buildings nowadays. I guess most of them have died.

Since I arrived in Mexico from Sweden, I earned all my money by renting the

commercial property that my mother bought for me when Daniel Huerta wanted to start a business with me. My parents also gave me some money from time to time. They got their money from the school that my father bought as a gift for Nora, his former paramour. After Nora cheated on my father with another man, my father took possession of the school. I will inherit all such real estate because I am an only child. I got more money from renting my commercial property than from being a biology lecturer or researcher at a university. Therefore, I loved that lifestyle.

As soon as I arrived in Mexico, I went to a very peculiar place found on top of a volcano known as Cerro la Negra, very close to the humongous Pico de Orizaba, a most holy volcano that is always covered in snow. The place where I went is the Large Millimeter Telescope Alfonso Serrano. It is a huge parabolic reflector that detects radio waves that come from places so far away they cannot be studied by looking at visible light waves. I made an appointment to go to see it because I was curious about it!

During spring 2012, I was collecting microlepidoptera in several states of Mexico. My parents helped me. While I was in Campeche, I got sick with dysentery. I suffered from fever, diarrhea, and vomiting. This illness was caused by the bacterium *Shigella dysenteriae*. When I was sickest and suffered the most severe symptoms, I kept solving the exercises of a critical thinking textbook that was part of my daily philosophical study. My mother was surprised by seeing how dutiful I was with my daily philosophical study. I told her why. I said to her:

"I am not going to waste time by not studying. Even the study time of a single day is important. It could make a crucial difference in the outcome of my struggle against Birgitta the Second."

In the two days that I spent getting healthy thanks to the antibiotic (ciprofloxacin), I was still too weak to look for moths. Hence, I read the excellent book by Erwin Schrödinger (1944) that is titled "What is life? The physical aspect of the living cell." I, of course, also kept solving the critical thinking exercises of my daily philosophical study. In the city of Campeche, I saw some Eurasian collared doves (*Streptopelia decaocto*) that were feral. This species was introduced by people. It was not native. The first time I saw it was in 2002 at Heathrow Airport, London, United Kingdom. Now they also lived in Mexico...

As soon as I was healthy, I continued my expedition looking for moths. When I reached Cancún, I took a boat in Punta Sam to collect plankton above the coral reefs. A turtle (*Eretmochelys imbricata*) swam close to me while I was fishing plankton with a special net that had a test tube at the end. It was attached to a string that I used to handle it as if it were a kite. It was a water (H_2O)

kite, not a normal aerial kite. Fortunately, as soon as the boat reached Isla Mujeres, I found on the beach a plastic table with a chair that was in the shade of a coconut tree (*Cocos nucifera*). There, I saw the plankton under my portable stereo microscope that Cees told me to buy to study moths. The amazing planktonic beings resembled complex geometrical figures.

I was not engaged in any scientific project that involved plankton. It is just that two years before, I bought a book by Ernst Haeckel (1899) that is titled "Kunstformen der Natur." There, I saw the paintings that depicted planktonic species. At that time, it seemed impossible to me that there were species that looked like that. Thus, I wanted to make sure that they truly existed. Indeed, the skepticism that I learned from Jana the Refulgent made me even doubt the testimony of Haeckel and try to test what he saw. He was right. I was speechless when I saw that planktonic creatures were indeed as bizarre and dazzling as in the paintings. Looking at them in real life was of course more rewarding than looking at the paintings. All Haeckel's fans should fish plankton at least once in their lifetime.

On Monday the 9th of April 2012, Mark Zuckerberg, the owner of social media platform Facebook, bought another social media platform known as Instagram. It was mainly for displaying photos. It became extremely popular. It caused a lot of mental illnesses among the young because girls and young women started to compare themselves with other ladies, usually women that they thought were more beautiful than themselves. That made them feel miserable. The ideal beauty changed because of this culture. Before, the girls and women that were considered as most beautiful were those that were slim, so a girl or woman wanting to be thought of as beautiful by most society only needed to diet. This was bad, but everything became worse...

Under the new beauty standards, only women who were able to spend plenty of money on cosmetic surgeries were deemed beautiful. American model Kim Kardashian became the gold standard of beauty... Strangely, these new beauty standards that were only affordable for wealthy women and were bad for mental health were labeled as "inclusive" by fashion designers and cosmetic surgeons. They claimed this to attempt to hide the psychological damage they were doing to women by giving the appearance that these new beauty standards were ethical. That is because they claimed the previous beauty standard glorified European beauty whereas the new standards were racially neutral. They said this to be aligned with progressive political values that were being used at that time by the rich to divide society. (We should not forget that far-right conservative values were also being promoted at the same time. That was to politically polarize society.) It is indeed true that the new beauty standards did not

glorify the beauty of any ethnicity. However, they glorified the beauty that only wealth can provide and that is never found among natural female bodies.

In a world where most people are not rich, it seems ridiculous to me to label such standards of beauty as "inclusive." They exclude average women. In addition to this, a lot of filters appeared. Filters are software that allows people to modify their image online. Average girls and women felt they were ugly because they did not look like these artificial versions of women. This cultural change did not happen overnight; it was slow. In Mexico, the drug traffickers' gun molls, who in Spanish are known as buchonas, became clones of Kim Kardashian... If you want to see Kim Kardashian, please watch "Fall Out Boy - Thnks fr th Mmrs (Official Music Video)" (2007).

Ten days after Zuckerberg bought Instagram, something truly chilling happened to me while I was looking for moths in Talpa, Jalisco. It was night. I was attracting moths to a blacklight lamp and a white sheet. I squatted to look carefully at a spectacular moth that belonged to the family Saturniidae. Then I listened to how dry leaves in the plant litter of the forest were being crunched by footsteps. Someone was walking behind me. I slowly turned my head, and just 4 m away, there was an enormous wild jaguar (*Panthera onca*) that came out of the forest. Jaguars are carnivores and they have mighty claws and teeth. They are truly scary. I started to slowly stand up. My mother looked at me and she saw how my face paled because I was extremely afraid. I felt very vulnerable because I was in front of a powerful wild feline. I was afraid that it would attack me, but I could not run because I assumed that even the slightest movement could lead to my doom. My mother shined the light of a flashlight on the jaguar's face. The feline was afraid, and it swiftly ran away inside the forest... Fortunately, nothing bad happened. The grand feline only came to visit us.

During daytime, in the mountains of Talpa, I saw a wild quetzal (*Euptilotis neoxenus*).

I went to look for moths at Tecomavaca, Oaxaca. We decided to collect moths in a ravine that people visit to watch macaws (*Ara militaris*). In that place, there are some cottages that tourists can rent to spend the night there. When we went during the daytime to that place, my mother and I started hiking, but suddenly we heard noises on the forest floor as if something was moving there. We stopped and no large animals were there, even if the sound of the creature seemed as if it was a big creature. We kept walking and we heard that sound again. When we looked again at the place where the sound was coming from, we saw a gigantic snake known as *Boa imperator* quite close to us. My mother was so frightened that she ran away... She decided that it was suitable to collect moths in such a

place, but she said that it would be better for us to sleep in a town instead of spending the night in the middle of the wilderness. She was afraid of the beast she saw.

That night, after having collected some moths, we slept in Cuicatlán, Oaxaca. In the hotel where we slept, there were some bales of alfalfa (*Medicago sativa*) to feed cows (*Bos taurus* & *Bos indicus*). Such bales were not truly fodder bales. They were containers to hide illegal drugs or weapons. They were covered with fodder so no one would know what they were hiding. Nonetheless, they had a tiny door to introduce the illegal cargo inside of them. This was a camouflage so soldiers would not be able to detect the illegal cargo in their checkpoints. We spent the night in a hotel owned by drug traffickers!

During daytime in La Esperaza, Oaxaca, we saw a lepidopteran known as *Papilio esperanza*. That is not the type of lepidopteran that I study, as it is a butterfly, not a microlepidoptera. Looking at this insect immediately reminded me of Mr. Ibarra. He was an entomologist that worked at the Universidad Nacional Autónoma de México (UNAM). He is an expert in butterfly systematics. He had told me that dead *Papilio esperanza* were sold very expensively to foreigners because selling them is illegal. He knew about that because he was an illegal trafficker of dead butterflies. As a matter of fact, I cannot imagine how someone might want to purchase a creature that looks almost like a mere *Papilio multicaudata*, but apparently, some fools pay a lot of money for it. Mr. Ibarra found it very easy to sell endangered animals illegally. The reason was that, as he was an employee of a research university, all such animals were legally collected.

That is because UNAM is a governmental institution that supposedly takes care of the environment, so all its ecological research is done to protect nature. Once the butterflies were mounted in the collection, Mr. Ibarra sold them illegally, and he got all the money for selling them. None of that money was granted to the university, so he was in fact stealing specimens from the insect collections of the university. Mr. Ibarra also stole books from libraries and computers from information technology centers at the university. He sold all of that illegally. Mr. Ibarra lived in a poor neighborhood in Iztapalapa. He never had money because he wasted all his income very easily being a drunkard and a womanizer.

Something bad happened to me when I went to look for moths in Tres Brazos, Tabasco. I returned to the hotel where I was spending the night in Villahermosa, Tabasco. As too many insects tend to approach the sheet that is being illuminated by the blacklight during collecting time, it is common that some of them end up traveling with us inside the car or in our clothes. That early morning in Villahermosa, after collecting moths, I felt a

sharp pain in the skin of my left oblique underneath my shirt. When I touched that part of my body with my hand, I picked up the insect that bit me there. While I was looking at it, the insect bit my thumb with its dreadful proboscis. I immediately threw it and from my thumb, I saw how a drop of blood was exuded from the injury, like in the injury that I had on the skin of my left obliques.

I was horrified when all this happened because that insect belonged to the family Reduviidae. The vectors of Chagas disease belong to this family, so I was afraid I would get this illness. Chagas disease is a dangerous heart disease that can also harm the gastrointestinal tract. I asked my mother to please swiftly catch the reduviid. My mother stomped on it. The reduviid was so strong that it stood up and kept running. My mother covered it with a wipe, and she placed the wipe that was surrounding the hemipteran inside a box. It was important to keep the insect so an expert physician could determine its species. In that way, we would know if it was truly a vector of Chagas disease or not.

A local physician was not able to determine the insect. Dr. Octavio Martínez Natera, the general practitioner that I always went to see, was not able to identify the reduviid either. We went to the faculty of medicine of UNAM to meet the group of expert physicians that study Chagas disease. They immediately looked at the corpse of the hemipteran under their stereo microscope. The physician told us that nothing bad would happen to me because the reduviid did not belong to any of the species that can infect people with *Trypanosoma cruzi*. He showed me some dead specimens that belonged to the species that are vectors of Chagas disease, and they looked almost identical to the animal that bit me. He then showed me their proboscis under the microscope, and I noticed that the proboscis of the dangerous species is as thick as a human hair, no more than that. On the other side, the proboscis of the animal that bit me was thick and bulky. I was so glad that nothing bad happened to me! The species that bit me was *Rasahus hamatus*. The species that are vectors of Chagas disease belong to clade Triatominae. *Rasahus* belongs to the clade Peiratinae.

On Wednesday the 4th of July 2012, it was proclaimed that some particles were detected in a European particle accelerator. These particles were four electrons, and two gamma-ray photons produced by the apparent decay of something. According to the mathematical equations made by theoretical physicists, the particle that decayed was the Higgs boson. According to quantum field theory, when fields are excited, they produce particles. In theoretical physics, the Higgs boson is the quantum excitation of the Higgs field. The Higgs field provides the property of mass to particles when they interact with it. If you

want to read about this discovery, please read the paper by ATLAS collaboration et al. (2012) that is titled "Observation of a New Particle in the Search for the Standard Model Higgs Boson with the ATLAS Detector at the LHC." It was published in "Physics Letters B" 716(1): 1–29. Some people thought this result could not be accomplished.

Even world-famous physicist Stepehen Hawking lost a wager because he thought such a result would not be found. The result of this experiment was heavily marketed by media outlets because such research was among the most expensive experiments performed at the beginning of the 21st century. However, not every all-important scientific experiment is extremely expensive. Every week there are important breakthroughs in science, medicine, and engineering, but unfortunately, as they do not have large marketing budgets, society ends up ignoring them.

My aunts inherited from my grandfather Tomás his Cuernavaca house after he died. I originally thought it would be inherited by my cousin Georgina Reyes. Georgina Reyes is the firstborn daughter of Esperanza. Esperanza was the wife of my uncle Jorge Reyes Mejía. I thought it would be obvious that she would inherit it because she was born before me. As my aunts ended up hating her, they decided to give the house to me. I named my new house Quinta Santa Hildegarda, after medieval nun St. Hildegard. Since I got the house, I planted a small botanical garden there. To embellish the rooms of the house, I bought a lot of art. I became a collector of paintings and sculptures. My collection grew steadily because it is a very large house.

Quinta Santa Hildegarda was built in 1970 over a lava field found between two ravines of the Glacis de Buenavista. The Glacis de Buenavista is a piedmont found between the volcanoes of the Trans-Mexican Volcanic Belt and the lowlands of the Balsas River Basin. Quinta Santa Hildegarda is found right in the limit between the Nearctic and the Neotropical realms. Therefore, there are wild plants and animals that come from the cold mountains of the Trans-Mexican Volcanic Belt and there are also wild plants and animals that come from the warm lowlands of the Balsas River Basin, the so-called Tierra Caliente. Among the wild animals that visited my gardens during nighttime when my aunts gave me their house, there were Virginia opossums (*Didelphis virginiana*), ringtails (*Bassariscus astutus*), and hairy fruit-eating bats (*Artibeus hirsutus*). These bats eat the fruits of the trees that my grandfather Tomás planted. When that house was being built, my aunt Ana Reyes found ancient tools that were made by people who lived there before the Spanish conquest of the Aztec Empire. Quinta Santa Hildegarda was built 75 m away from what was, in the past, the Camino Real de Acapulco, the historic

route that since the time of the Spanish Empire linked Mexico City with the Port of Acapulco. Hence it was also the route that linked Mexico City with the Philippines and the whole of Asia.

Quinta Santa Hildegarda is said to be haunted. According to my mother, when she was a child, she listened to the steps of a soldier that was marching on the balcony of the top floor during nighttime. When my mother looked at the balcony through the window, no one was there. My mother never told this to Román, but he said to my aunt Yolanda that he listened to the very same steps on the patio. After researching about that, I learned that there was a paredón wall where the soldiers of General Emiliano Zapata performed executions by firing squad. This was on a nearby street where there is now a school. A neighbor once complained to my father that during nighttime, the dogs (*Canis familiaris*) in Quinta Santa Hildegarda did not stop barking. My father said to him that there were no dogs in Quinta Santa Hildegarda. Regarding this, the receptionist of the Hotel GS Cuernavaca told me that a street of Santa María Ahuacatitlán that is just 150 m away from Quinta Santa Hildegarda was haunted by hellhounds. They were ghostly black dogs with fiery eyes that attacked people during the nighttime. As soon as these dogs almost reached their victims, the dogs transformed themselves into bonfires.

When I christened my house as Quinta Santa Hildegarda, I decided to use a mandrake (*Mandragora officinarum*) as its logo because St. Hildegard was an herbalist, and this plant was very important for her. The mandrake that I chose as my house's symbol has anthropomorphic female roots, as it was depicted in old times. From that logo, I devised the supporters of my own coat of arms. They are symbols of my Cuernavaca house. My heraldic supporters were blazoned together with the whole coat of arms by Alfonso de Ceballos-Escalera and professionally painted for the first time by Carlos Navarro Gazapo. The version of my anthropomorphic mandrake that can be seen in this book was made by Kasia Burzmińska (**page 567**) and by Michelle Maiden (**page 4**).

Ancient physician Pedanius Dioscorides claimed that medicinal plants have the same shape as the human organ or tissue where the drug target is found. This is known as the doctrine of signatures. We of course now know that drug targets are not necessarily part of a human organ or tissue; they might also be molecules within pathogenic organisms or viruses found provisionally in an organ or tissue. Whether plants have the shape of human organs or tissues is a subjective point of view that has to do with the imagination of the beholder. What is indeed objective is that mandrake was used as a powerful anesthetic that had effects throughout the whole human body.

That is why, according to Dioscorides in "De Materia Medica," the most blessed Pythagoras claimed its roots looked like the whole human body. That is why they are depicted like humans in my coat of arms. Mandrake roots may not have a human shape, but they are indeed powerful anesthetics. However, an overdose can easily kill the patient. That is why we now use halogenated ethers instead of alkaloids from dangerous Solanaceae. St. Hildegard claimed in her book "Physica" that the mandrake was used by Christian European witches as an idol they worshiped, to perform magic, and to conjure ghosts. She said that it attracts evil spirits because it looks like a human body. The Devil and his angels are of course always looking for humans to spiritually ruin them.

Quinta Santa Hildegarda is found in Santa María Ahuacatitlán. This is one of the suburbs of the great city of Cuernavaca. To the northwest of Ahuacatitlán, there are three dormant volcanoes: Cerro Zempoala, Cerro del Campanario, and Cerro el Caballete. Cerro el Caballete is the smallest one of them. *Quercus* forests cover its lowermost mountainsides. Ahuacatitlán is found beneath the southeastern slope of Cerro el Caballete. This slope is known as El Tepeite. In the downtown of Ahuacatitlán, one can find the old church known as Parroquia de la Asunción de la Virgen Santa María. As the downtown area is very old, some of its houses are also quite old. Other houses have been demolished and then rebuilt again. To the west of Ahuacatitlán, one can find a monastery known as Monasterio de Santa María de la Resurrección. In the 20th century, Lemercier, a Catholic priest, started a Benedictine monastic congregation there. His congregation was ruled by the principles of Freudian psychoanalysis. All the monks were analyzed by a psychodynamic therapist. Lemercier decided to introduce psychoanalysis because he thought monks joined monasteries because they were what Freud referred to as sexually repressed men. The "Diagnostic and Statistical Manual of Mental Disorders" (fifth edition text revision, 2022) does not list sexual repression as a mental illness. However, Freud (1908) medicalized it in his paper "Die 'Kulturelle' Sexualmoral und die Moderne Nervosität" that was published in "Sexual-Probleme" 4(3): 107–129. He thought it was an issue that should be fixed by a therapist. I think he was unfair and ethnocentric because what is sexual repression in one culture is sexual normality in another one. I do not agree with hating human sexuality, but we should not diagnose as mentally ill the people who do not agree with us.

As I wrote in Chapter 5, Catholics inherited a dislike for human sexuality from Alexandrian Hellenistic Jews and Gnostics that lived in the Nile Valley in ancient times. So, Lemercier's monastery was considered

heretical by the government of Pope St. Paul VI in the 1960s. Thus, psychoanalysis was abolished. Nowadays, it is an average monastery. As I explained in Chapter 5, Hellenistic Jews from Alexandria were older than Hillel and Shammai. Therefore, their beliefs and "Torah" interpretations were totally different from modern Rabbinic Judaism.

The most surprising animals of Ahuacatitlán are the Virginia opossum (*Didelphis virginiana*); the ringtail (*Bassariscus astutus*); the common raccoon (*Procyon lotor*); the rock squirrel (*Otospermophilus variegatus*); the common house gecko (*Hemidactylus frenatus*); the crevice swift lizard (*Sceloporus torquatus*); the black vulture (*Coragyps atratus*); the golden-cheeked woodpecker (*Melanerpes chrysogenys*); the great kiskadee (*Pitangus sulphuratus*); the tropical kingbird (*Tyrannus melancholicus*); the great-tailed grackle (*Quiscalus mexicanus*); the scorpion that is able to kill people with its venom (*Centruroides limpidus*); the giant vinegarroon (*Mastigoproctus giganteus*); the white morpho butterfly (*Morpho polyphemus*); and the black witch moth (*Ascalapha odorata*).

Thanks to Professor Jerzy Rzędowski, I met a plant scientist named Professor Hilda Flores. I was working with her (19.320522125609617, -99.19407515100593). We were describing a new species of plant that we eventually named *Suaeda pulvinata*. This is a very peculiar plant because it is a halophilic extremophile. Another peculiar feature of it is that during half of the year, it lives underwater as an aquatic plant, and the other half, it lives on dry land. When it lives as a terrestrial plant, great sandstorms partially bury it underground. It grows out of the sand to reach the atmosphere. What is probably the most outstanding fact of this plant is that it is one of the edible plants known as seepweeds. It lives in Lake Texcoco, just to the east of Mexico City. Being an edible plant that lives close to the fourth largest city in the world, one would think that at the beginning of the 21st century, it would already be known by science, but it was not...

Once, when I first learned that there are plant species that have a hybrid origin, I told Tiina Särkinen that my dream was to discover a new plant species that would be a hybrid species. I fulfilled my dream when I described *Suaeda pulvinata* together with Professor Hilda Flores. The reason is that this species appeared in the past when naturally, a *Suaeda occidentalis* and a *Suaeda linearis* had hybrid offspring. *Suaeda pulvinata* was drawn in our scientific paper by a very talented painter named Albino Adelaido Luna. That is how I met him. He has painted plenty of the lovely illustrations that you can see in this book. *Suaeda pulvinata* looks pink during half of the year. A lady named Violetta

Karwacki-Neisius, who worked at the University of Edinburg at the time I was working in the lab of the narcissist professor, told me that *Suaeda pulvinata* would be a very attractive plant for ladies, as according to her, pink is the ladies' color. I guess she thought all ladies are like Princess Peach from the Super Mario franchise!

Professor Hilda Flores Olvera, my coauthor with whom I described the new plant species, was born in Mexico. She earned a PhD in plant systematics at UNAM. Her PhD supervisor was Patricia Dávila Aranda. Her PhD thesis was titled "Sistemática de *Atriplex* sección *Obione* (Chenopodiaceae) en Norteamérica" (1994). As she became an expert in the family Chenopodiaceae, almost all her work involved field trips to look for plants that live in the northern deserts of Mexico, especially the Chihuahuan Desert. The Chihuahuan Desert is crossed by undocumented illegal immigrants and by traffickers of illegal products to reach the United States of America. The government of Mexico sends policemen and soldiers that are equally rough and brutal to fight against them. Therefore, Professor Hilda Flores's expeditions to the north of Mexico involved plenty of risks and threats that she and her fellow colleagues and students faced bravely.

Moreover, such deserts are not only filled with evil people. In the places where the professor collected plants, there were also dangerous wild creatures such as venomous snakes and scorpions. Professor Hilda Flores Olvera always worked as a lecturer and researcher at the university. She always worked collecting plants for the MEXU herbarium. Her work involved writing scientific papers with several colleagues as coauthors and supervising students' theses. She has righteous thoughts, emotions, and actions. She is virtuous and saintly. She always does what pleases God YHWH and all other divine beings. Unlike most Mexican ecologists, she is not arrogant. She is humble, approachable, and kind.

I was in Mexico getting ready for my pilgrimage to the Holy Land. Professor Hilda Flores agreed to be my contact in Mexico in case something bad happened to me when I would attempt to visit Jabal Musa, one of the places that are claimed to be the biblical Mount Sinai, or when I would attempt to enter Israel through the immigration office of the Ben Gurion Airport of Tel Aviv. We should not forget that since the fall of the Ottoman Empire, the Middle East has always been very dangerous.

In the 2010s, it was said in the foreign travel advice website of the British government that there were evil terrorists in Sinai. Also in the 2010s, it was said by backpackers in Internet blogs and forums that the evil immigration officers at Ben Gurion Airport were trained in the sort of military techniques used to psychologically abuse war prisoners but that they applied them to

innocent average tourists as part of their counterterrorism strategies. I do not know if these rumors were true, but just thinking about them was frightening. I wrote before that after the Arab Spring, it was safer to travel by plane and that terrorism diminished. That was true in most countries, but that does not mean the Middle East was safe. In exchange for the help of Professor Hilda Flores, I would place a written prayer that she would give me in the Kotel, the Western Wall of the former Second Temple of Jerusalem. Professor Hilda Flores's orison was written in a pretty bookmark that was printed in England. It had an illustration that depicted flowers and lepidopterans. This is her prayer that she wrote to God YHWH:

"A prayer for ill people. May the world give them respect, love, and understanding. Above all, the opportunity to live."

Professor Hilda Flores blessed me before my pilgrimage. I communicated with her by email (electronic mail), telling her about what I was living during my pilgrimage.

Before embarking on my pilgrimage to the Holy Land, I drove my car along the route of Mariana (see Appendix D), and Emilio the Sage blessed me by email. It was the same tradition when Jana the Refulgent blessed me before my Grand Tour, but Jana the Refulgent did not do that using email. At last, it was Monday the 10th of September 2012, the day I was waiting for a long time!

It was the beginning of the Second Pilgrimage. This second pilgrimage was more carefully planned than my Grand Tour. I went by plane from Mexico City to London and from there to Cairo. Egypt freaked me out because everything is totally different from Mexico. It has a different people, a different culture, different towns, &c. I visited the pyramids of Saqqara and Giza. The pyramids are so old that when they were built, there were still ground sloths (*Megalocnus rodens*) living in Cuba and gorilla-sized lemurs (*Archaeoindris fontoynontii*) living in Madagascar! I went to the Egyptian Museum in Cairo where my favorite exhibits were the golden mask of King Tutankhamun and the Anubis shrine that shows God Anubis in His non-human form (*Canis lupaster*) on top of it: .

I then went to the ruins of Beni Hassan and Amarna. The history of Amarna is amazing because Akhenaten, the saintly king who made the city his capital, was a religious reformer that may have influenced the development of modern Abrahamic religions. Inside one of the Amarna tombs, there was a gecko (*Ptyodactylus hasselquistii*). The Muslim who was guiding me was afraid of it because according to him it was a bad luck omen. That was surprising because in Roman times, it was said in Egypt that geckos from embalming workshops were important for witchcraft. You can read this in the "Greek Magical Papyri" (PGM VII). It is likely that these

ancient beliefs survived until today. The gecko species *Ptyodactylus hasselquistii* was named after archaeologist Fredrik Hasselquist. I think Hasselquist was killed by the curse of an akh, an undead ancient Egyptian mummy. If you want to read his tragedy, please see Appendix H in this book.

After that, I traveled by train to Luxor. In Luxor, I was awed by the paintings of the Valley of the Kings, especially by the frightening Chthonic snakes (*Python sebae* & *Naja nubiae*) and dragons from the "Amduat" text. In real life, spitting cobras (*Naja nubiae*) eject venom from their fangs into the eyes of people. This may cause corneal damage. On the other hand, the mythical spitting cobras from the "Amduat" text eject fire from their fangs to punish the sinners in Hell! From Luxor I went to Abydos, the holiest place in ancient Egyptian religion because it is said that Osiris the Khenti-Amentiu resurrected there. In Abydos I saw the outstandingly magnificent temple of King Seti I, and the art on its walls is breathtaking! It is the most beautiful building from ancient Egypt! From Luxor I took a cruise on the Nile River. This cruise included plenty of day trips to many archeological sites.

While I was on the cruise ship, I saw a wild Nile monitor lizard (*Varanus niloticus*) on the banks of the Nile. I thought it was awe inspiring because it was enormous. When I reached Aswan, I went by bus to Abu Simbel and from there I took another cruise to the Nasser Reservoir.

After that, I went by myself to Alexandria. When I reached the hotel in Alexandria, they told me that my reservation was canceled. I previously knew that they did the same to me in Siwa. I think they wanted me to pay the full price again. That never happens in Europe. In Europe, hotel reservations are secure. At that time, I was not very confident of what would happen in the rest of my pilgrimage. I was not ready to get the bad news that suddenly my reservations were canceled. I was not ready to scuba dive. I was not ready to go to the Jabal Musa at a time when supposedly there were terrorists kidnapping tourists in Sinai. I was not ready to go to Ben Gurion Airport that was supposedly filled with violent officers. The situation was overwhelming. Egyptian hawkers pestered us tourists a lot to attempt to scam us and get our money. I was also afraid of Islamic terrorism. As a result of this, I decided to return to London. I said to Professor Hilda Flores that I decided not to continue. She congratulated me for being cautious.

Something interesting that happened during my Second Pilgrimage was that in the Egyptian Museum, I went to see the mummies of the ancient kings, including the mummy of King Ramesses II—I found it so terrifying when I watched it on television as a kid. During my Second Pilgrimage, I was not afraid of seeing them.

In fact, I did not feel any emotion when I saw them. My 1994 mystical experience in Santo Desierto del Carmen, the Stoic teachings of Emilio the Sage, and my daily philosophical study to protect me from Birgitta the Second ended my fear of mummies. The mummies that I liked a lot were the crocodile (*Crocodylus niloticus*) mummies that I saw in a museum in Kom Ombo. Ancient Egyptians mummified them because the crocodile was the holy animal of God Sobek. I liked them a lot, because unlike human skin, crocodile skin is beautifully preserved when mummified. Hence, crocodile mummies have an appealing appearance as if they were still alive.

The Sahara Desert is too dry. It looks almost as dry as the Atacama Desert. In the Umm El Qa'ab necropolis of Abydos, where according to ancient legends King Osiris the Khenti-Amentiu resurrected, corpses were interred since the time of the Naqada I culture. At that time, what is now a dry desert was a fertile land. Egypt was so rich in plant life that it was inhabited by wild megafauna such as African savannah elephants (*Loxodonta africana*), lions (*Panthera leo*), black rhinoceroses (*Diceros bicornis*), white rhinoceroses (*Ceratotherium simum*), Nile hippopotamuses (*Hippopotamus amphibius*), giraffes (*Giraffa camelopardalis*), aurochs (*Bos primigenius*), hartebeests (*Alcelaphus buselaphus*), common ostriches (*Struthio camelus*), and saddle-billed storks (*Ephippiorhynchus senegalensis*). It is amazing to think how the world changes...

Jurisprudence

Jana the Refulgent considered health and life to be the most precious things that humans have. Therefore, we ought to protect them more than anything else. I do not know if St. Lucy truly existed. However, in St. Lucy's legend, the young Roman maiden prioritizes religion over her own life. St. Lucy might be fictitious, but there were indeed plenty of Christians that underwent martyrdom because of their faith. These people were not only victims of the Roman Empire. They were also victims of the Christian churches of that time. The reason is that the Christian strategy to resist the persecutions was brainwashing churchgoers by convincing them that undergoing martyrdom was better than life. The premise was that whoever would undergo martyrdom would become a saint in Paradise after dying. In this way, the pitiable ignorant churchgoers underwent martyrdom to benefit the church authorities. This benefited them because it avoided Christianity going extinct, as they did not convert to a pagan religion to save their lives.

Moreover, by doing so, they allowed Christian authorities to empower

themselves after persecutions finished. Plenty of heroes work for social and economic causes that they do not fathom. Church authorities fooled the poor martyrs by telling them that faith was more important than their health and their lives. As I said before, health and life are the most beautiful and important things that humans have, according to Jana the Refulgent. It is indeed true that she loved self-sacrifice, and she perpetually practiced it by inhibiting her desires in order, to attain higher aims. Nevertheless, self-sacrifice always needs to be performed to improve one's life, and to avoid health potentially being lost. If one uses self-sacrifice to go against our own life or our health, then self-sacrifice ends up being as bad as the hedonistic tribulations that we initially attempted to fight using self-sacrifice.

Since I read "Birding on Borrowed Time" by Phoebe Snetsinger (2003), I realized that its self-destructive message was against the teachings of Jana the Refulgent. Nonetheless, I did not think it was something bad until I experienced what St. Thomas Aquinas would refer to in his principle of double effect described in his "Summa Theologica" as the "harmful side effects" of my life list. I was not my life list's master anymore. I was my life list's slave. As philosopher Diogenes of Sinope said in the "Cynic Epistles:" "The objects we own end up owning us." That is why I noticed that it was senseless to make exceptions to the teachings of Jana the Refulgent related to activities that I thought were pleasurable. One needs to follow the ideas of a wise person as strictly as possible. If we stop adhering strictly to the doctrine of someone wise, are we behaving as if we were ignorant? We indeed behave ignorantly, and not just that, we end up becoming ignorant. This is because what makes people wise is not just what they know, but also that they behave wisely. In the same way, ignorant people are not just characterized by their lack of wisdom, but also by their ignorant behavior. Is there an easier way to end up being ignorant than behaving oppositely from how someone wise would behave?

As soon as Jana the Refulgent and I met each other in 2003, we felt mutual sexual attraction. At the time, I felt ashamed of being in love with her and being sexually attracted to her. I had an intense fear that girls would reject me. My fear was so extreme that I thought anything that could lead to my rejection by a girl that I fancied was bad. I thought even falling in love and feeling sexual desire was bad because both feelings make us woo a girl and she can reject us at that time.

Jana the Refulgent convinced me that there was nothing wrong with falling in love or feeling sexually attracted to a girl. She allowed me to know that love and sex were good. They are to be celebrated and not to be hidden. Before meeting her, my ideas about sex and love were totally wrong. In

the same way, all the people that hated Linnaeus for creating a sexual system to classify angiosperm plants were wrong. Also, the people that hated him for embellishing the botanical garden with a nude statue of the gorgeous Goddess of love and sexuality were wrong. Like me before 2003, these people did not realize that we must celebrate and love our sexuality and the sexuality of other beings such as the angiosperms. We should not see sexuality with hatred and shame. The reason is that all that we are is thanks to the vaginal coitus that happened when our parents had sex, or if you were born by in vitro fertilization, by the pleasant masturbation of your biological father.

In the same way, most of what we eat exists thanks to the reproduction of angiosperms which is mostly sexual. Even the meat we consume is made of proteins. The nitrogen found in the animal proteins that we eat once was in the vegetative organs of plants that were eaten by the animals that produced such proteins. Furthermore, all the natural carbohydrates synthesized on planet Earth are made by producers. Due to the food chain, the carbon atoms of these carbohydrates end up making up the structures of the cells of most organisms that exist. Plenty of photosynthetic producers are of course angiosperms.

Please notice that by rejecting the views that state sex is shameful, I am not claiming that sexual repression is a mental health problem that needs to be medicalized. I simply think it is a different opinion than mine of which I do not approve. I think it is wrong to medicalize views against our opinions as Freud did. He was an interested party while doing this because he got money from healing people. When psychotherapists get money from healing mentally ill people, some of those therapists want more insane people in order to heal them. If there are not enough of them, the therapists would naturally invent new illnesses so fewer people are healthy, and they can cure the ones that were previously labeled as sane.

In the book "Folie et Déraison: histoire de la folie à l'âge classique," philosopher Michel Foucault (1961) thought the problem of psychiatry is that mental illnesses are social constructs that reflect our history and values. I do not think all mental illnesses are social constructs. For example, schizophrenia, the disease studied by the lady of the pineapple (*Ananas comosus*) in Uppsala Universitet, is clearly not a social construct. However, others are indeed social constructs, as was sexual repression from Freud's point of view. Yet, I disagree with Foucault because I do not think that mental illnesses that are social constructs reflect our history or values. Mental illnesses that are social constructs simply reflect our economic system. Inventing new forms of madness is just an economical phenomenon because psychiatrists of course want more money, and as part of the free market

economy, they create new diseases, as manufacturers create new products. In that way, they can provide goods and services to new customers. It is a simple laissez faire phenomenon. Foucault was too poststructuralist to perceive simple capitalist phenomena. Sometimes seeing the world through abstract theories blinds us from common sense. I believe my explanation is better than Foucault's because it is a more parsimonious hypothesis, so it would be better according to Occam's razor.

I believe part of the reason why Jana the Refulgent had a scientific worldview was also economical. Both her parents were pharmacists, and they got the money to send her to study abroad thanks to selling scientifically produced medicines. Of course, science was economically beneficial to her. Hence, she unconditionally supported it.

When I saw the wild jaguar (*Panthera onca*) in Talpa, I was frightened. Many people would not have felt as much fear because common sense and zoology tell us that wild jaguars do not tend to attack people. But at that time, I did not think, I just felt fear. That was good. Jana the Refulgent said that we must pay attention to our bodies. I need to pay attention to how my body feels, how it loves, how it hates, and how it fears. We should not reject our emotions. We must passionately feel them and live them. Jana the Refulgent loved reason a lot, but this did not entail that she would dislike strong emotions as Aristotle in his book on "Politics" disliked them. This is because Jana the Refulgent wanted me to live a good life as a human being, a being that is both emotional and rational. Human beings should not deny either aspect but use them for their own benefit and to live a good life.

Asia the Mystic considered that humbleness was a sign of holiness, and that arrogance was a sign of sinfulness. From this point of view, it could be considered that Professor Hilda Flores was a living saint and that the other Mexican ecologists were average sinful people. That was in fact what happened. Professor Hilda Flores was by far superior to all the other ecologists. She was in fact even superior to the ecologists that were more famous than her, such as Valeria Souza or José Sarukhán. Souza and Sarukhán saw Professor Hilda Flores as if she were less than them. Thus, they humiliated her and behaved in a despotic fashion with her. Nevertheless, Professor Hilda Flores was by far greater than them. Even if they were more renowned, they were victims and prisoners of their own arrogance. On the other hand, Professor Hilda Flores was free thanks to her virtue.

Most Mexican ecologists suffer from ignorance, lack of quality education, and of what psychotherapist Alfred Adler (1907) referred to as an inferiority complex in "Studie über Minderwertigkeit von Organen." I am not labeling the inferiority complex as a mental illness, only as a vice of

human nature. The ignorance of the Mexican ecologists is the result of not knowing that they have more in common with the rest of humanity than they want to believe. Therefore, like most humans that exist, they are not better than most other humans. Indeed, most of us are just average in the way we are.

The lack of quality education in the Mexican ecologists is not a lack of quality ecological education, but a lack of quality moral education. This is because at university they learn that they are better than most people because they have a special gnosis (knowledge) that the rest do not have. Nonetheless, they are wrong. All of us human beings have a special knowledge regardless of what we do in life because life teaches different stuff to all of us. The inferiority complex of the Mexican ecologists is a result of average people not thinking ecologists are useful for society. As a psychological coping mechanism, they become extremely arrogant. In this way, they stop feeling useless or inferior to the physicians, engineers, and lawyers that most of Mexican society respects.

Asia the Mystic said that she did not just want to know the Abrahamic religions mystically by praying and meditating. She also wanted to learn about them in an intellectual fashion, by logically studying their most important sacred texts. If we study the ancient pagan texts of Mesopotamia and Egypt, we will notice that a lot of the Jewish "Tanakh" was based on such cultures. Hence, if we want to truly know the Abrahamic religions, we must study these ancient civilizations. This is because it is not right to believe or follow something only because someone who has authority, or the whole of society, tells us we ought to follow it. We must know the intellectual foundations of what we believe. We ought to imitate Asia the Mystic in this respect.

This is not only advice for religious people. Even people who believe in a materialistic worldview should understand the mathematics and physics that underpin most natural phenomena described by science. Regarding Asia the Mystic, her advice that she gave me when she suggested that I would go to the Middle East was suitable. The "Torah" shows characters that founded the religion of God YHWH, such as prophets Abraham, Joseph, and Moses, living adventures in Egypt. Moreover, a lot of the pagan Pharaonic Egyptian theology and its literary styles were inherited by the "Bible." Thus, all believers in Abrahamic religions (and people who have inherited Western culture) ought to see Pharaonic Egypt as one of the cradles of our culture.

When I saw the mummies of Guanajuato in 1989 during my childhood, I feared their deformed and monstrous looks. But as I got older, I lost such fear, and I did not fear the mummies of the Horus kings of the Upper and Lower Egypt. When Jana the Refulgent

left her family to go live alone in the United States of America for the first time, she was still a child. She was afraid. However, after having several experiences, she knew that living alone, abroad, in a developed nation while being a well-off girl, was not something scary. She knew that living far away from her family could be an enjoyable experience. According to her, what made her stop being afraid was the knowledge she acquired while living in that new place.

In my case, as with Jana the Refulgent, what made me stop fearing human mummies was living. I learned plenty of things over time that transformed me into a young man totally different from the kid that visited the museum of the Panteón de Santa Paula, the mummies' graveyard of Guanajuato. Learning changed both Jana the Refulgent and me. It transformed us into different persons. Indeed, knowledge is not just something that we store in our brains. It is something that actively changes us. It transforms us into different beings. Human beings always change. They can become better or worse. That is why we need to carefully plan our life learning, to change in a way that we can improve, not in a way that we could become worse humans. The same is true regarding civilizations. The academic, scientific, or technological knowledge that a civilization produces necessarily changes it. Such intellectual production must be guided in the right direction, so it can modify a civilization in a good way and not in a bad way.

In old times, the Sahara Desert was an extremely fertile place full of savannahs and megafauna. Now it is an extremely dry, arid place. This is how time modifies the world. Time destroys everything, and from what it destroys, it creates new things. Jana the Refulgent thought that it is beautiful to see how nature and the world change with time. She taught me to see the large changes that happen as something natural and marvelous. Average people are very afraid of changes, especially if they are environmental changes. Nonetheless, Jana the Refulgent allowed me to see that all physical reality is subjected to an eternal change, as pre-Socratic philosopher Heraclitus said. We must adapt to all changes with flexibility. We should not fear them to such an extent as attempting to avoid them at all costs. That is because time cannot be paralyzed, so environmental or any other changes will happen. In case time could be paralyzed in any way, that would be something abnormal and antinatural. It would be more terrifying and worse than time itself.

CHAPTER 26. *NARCISSUS HISPANICUS*

I went to visit Asia the Mystic, and we went to a restaurant named Il Forno. Nowadays, it is named India Masala. It is in Kraków, Poland. I told her that I was not able to finish my pilgrimage. I told her something that Rosario said. Rosario was my father's best friend when they were kids. He used to go often on pilgrimage to San Juan de los Lagos, Jalisco, Mexico. Rosario told my father that of all the people who go on pilgrimage, those that start but cannot reach the end of the pilgrimage become ghosts. They cannot rest in peace because they were not able to fulfill the pilgrimage. Rosario said that he was scared by many ghosts during some of his pilgrimages. Asia the Mystic told me that such curses do not happen because:

"Heaven does not care whether or not people keep promises or whether or not they make pilgrimages."

However, we both decided that the best thing to do was for me to eventually perform my pilgrimage to visit all the places that I was not able to visit. Asia the Mystic used her oracular powers to tell me what the date of the Third Pilgrimage would be. The date that she told me was the date when I performed my Third Pilgrimage, because Asia the Mystic claimed she learned the date as a divine revelation.

Asia the Mystic was very beautiful, and I loved her a lot. I loved to hug her, kiss her, and hold her by her waist when we talked. I always said to her how gorgeous she was. Like Jana the Refulgent, she said that I was handsome. At that time, Asia the Mystic was working as a computer systems engineer. She did not study that at university. Her undergraduate degree was in plant sciences.

I wanted to visit Lithuania. Therefore, I said to Gabrielė Indrišiūnaitė that I would go there. As she was still in Uppsala, Sweden, she told her friend Asta to please show me around the city of Vilnius. Asta was Gabrielė's classmate when they were studying for their bachelor's degrees in biology. Asta was a nice young woman. I sightsaw the city with her, and it was fun. I also ate and dined with her.

When I planned my Second Pilgrimage, I initially thought I would travel to Egypt, Jordan, and Israel. From there, I would go back to the United Kingdom. In the United Kingdom, I would go to a New Age ashram to continue seeking spirituality. As I said before, I canceled my Middle East journey and instead traveled to the far safer and gentler countries of Europe. Nevertheless, I still could go to the Western ashram. The Western ashram that has links with the

***Narcissus hispanicus* Gouan, 1773 (Asparagales: Amaryllidacea)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 864.**

United Nations is known as Findhorn Ecovillage. It is in Scotland, United Kingdom. Even though the kind of spirituality that is practiced there is New Age, it works a bit as a Hindu ashram. It also gets money from the government because they use renewable energy and because they grow their own food. People from all religions or spiritual beliefs are welcomed. Yet, the staff of the foundation have their own local religion. They worship a local God that they refer to as the Angel of Findhorn. The temple of this Deity was burnt down in 2021 by a former member of the staff.

I arrived at a building known as the Cluny Hill College (57.60866307274851, -3.5962510642028174). I stayed in that building. I participated in Findhorn Foundation's Experience Week. During the time I was there, my worldview changed completely. I thought about matters on the meaning of truth and the scientific methods that I never thought about before. The Experience Week was a course that lasted for one week. In this course, the people who joined it experienced what it was like to live in the ashram. The students also learned about the ashram's ideology. The reason why I chose a New Age ashram was that at that time, my religious beliefs were very syncretic. I did not identify with any of the major religions because my beliefs included elements from many of them. Moreover, my spirituality was close to what I learned from Enríquez the Lawgiver. We should not forget that he was a New Ager.

Something I noticed in Findhorn was that most residents of the community were very solemn, irascible, and intolerant to new ideas. In general, I could say most people were not very happy. I think that was because most residents were old people. At least they seemed old to me, compared to my age. I was 27 years old at that time. Being in Findhorn gave me the impression that old age removes happiness from human life. This must be because of all the physical and cognitive problems that happen because of getting old. My fellow students at the Experience Week were also old people, but I met two persons that were around my age. One of them was a young German woman named Annina. She did not feel comfortable in Findhorn because we frequently performed circle dancing. This means people holding hands in a circle. We also held hands when we were not dancing, as imitating Victorian spiritualist séances, because some of Findhorn Foundation's founders created rituals based on spiritualism. Annina's problem was that when everyone held hands, hands tended to sweat. Annina did not like the feeling when her sweat mixed with the sweat of the person whose hand she was holding. She thought it was disgusting.

There, I also met an English woman named Jenny, who was not that old. Her blue eyes were serene and stunning. She was svelte.

Her blonde hair was wavy. She was loving, so we spent a lot of time hugging each other. I loved lifting her blouse to see the beauty of her torso and to caress her skin. As she never wore a bra, I could see her small breasts, and her hard and erect nipples. She always laughed when I penetrated her innie navel with my finger to caress it. I also loved to caress her legs. I spent all my free time with her in the gardens. Jenny made a drawing that she gave to me. In it, she wrote that she loved me. That was a bit weird because we did not know each other for a long time. I think we indeed fancied each other, but stating that we loved each other was a bit extreme...

Wizard Iamblichus lived during the time of the Roman Empire. He was utterly deluded in the way he used the word "energy" in his book titled "On the Mysteries of the Egyptians, Chaldeans, and Assyrians." According to him, "energy" was a substance that links spiritual beings and the physical Universe. The people from Findhorn were like Iamblichus, although none of them read his book, so they spent all the time talking about spiritual "energy" and claimed that by just practicing mindful meditation, they could detect it with a sort of extrasensory perception.

I can remember that Jenny spent a lot of time without eating. One day, that even worried me. An old lady named Ilse who was also a student of the Experience Week told me that I should not be worried for Jenny. According to Ilse, Jenny had reached such a high spiritual stage that she was able to live without eating any food, just obtaining pure "energy" directly from the Universe through meditation. Apparently, Ilse thought that Jenny could obtain the energy to live without the need of oxidizing organic molecules as average human beings do. Fortunately, the staff did not believe in Ilse's superstitions and looked for Jenny during mealtimes when I asked them to please do that. I did not believe in Ilse's superstitions either. What I think is that Jenny suffered from an eating disorder such as anorexia.

At some point, I was working in the garden with an old lady who was a resident of Findhorn. She claimed that she was able to feel the vital energy of living things and in that way, she knew if something was alive or not. I was helping her to remove from the ground some bulbs of plants that belonged to the genus *Narcissus*, so other people could plant other plants there later. I asked the lady that supposedly was able to psychically feel vital energies what she felt in the *Narcissus* bulbs that we just removed from the ground. She said: "I feel at this moment how their energy is leaving. I am feeling their death that is happening at this very moment." What she said was totally false! The bulbs of *Narcissus* can be planted again and from them, all the vegetative organs grow again during the warm season! They were not dead or dying! I did not say

anything to the lady, but it was obvious that her extrasensory perception was just fantasy. It is like when young children play superheroes—it does not mean that they truly have the fighting abilities of the guys they admire. Nonetheless, in this case, the lady did believe her fantasies were true! During the time I was in Findhorn, I saw a lot of pseudoscientific self-delusions. I realized that New Age was not a suitable spirituality for me, even though I developed most of my religious views through mixing the beliefs of several religions.

From what I saw in Findhorn, it seems clear to me that being a New Ager implies believing in falsehoods that go against the scientific laws of nature and that simply lead us to self-delusions. Medieval philosopher Averroes was right when he delivered his fatwa "Faṣl al-Maqāl." In it, he stated that there is only one truth, so religion should not contradict science when attempting to explain reality. This is how I understand his fatwa: Whenever religion seems to contradict science, such beliefs should be understood as metaphors and not descriptions of nature and the Universe. It is good to have a religion, but not to contradict such scientific principles that are well understood to keep having faith in our religious ideas. Energy should only be studied and discussed by science, and faith should only be studied and discussed by religion. Energy and faith should not be mixed in the same way that science and religion should not be mixed. As paleontologist Stephen Jay Gould said, science and religion should not be engaged in studying the same subjects. Gould (1997) stated this in his paper "Nonoverlapping Magisteria" that was published in "Natural History" 106: 16–22.

This principle should be also extended to some other fields, such as theoretical physics. Plenty of the knowledge that has been obtained by theoretical physicists that has not been tested with experiments should not be part of the scientific worldview until such hypotheses are empirically tested. In the meantime, such mathematical results of theoretical physics should be seen simply as mathematically based religion or philosophy. According to my teacher Jana the Refulgent, even a lot of "science" that cannot be currently tested experimentally should not be thought of as truthful. Hence, it should not be considered as part of the rest of science. This is because as it has not been replicated, or even experimented with, its accuracy is not the same as the other scientific fields where metanalysis of experiments is routinely practiced. Thus, we should not have firm faith in it.

Asia the Mystic saw that there were miracles and mystical experiences in life. Therefore, these things were evidence that made her believe in absolutely everything preached by Christian religion without doubting any of its worldview. It is obvious that this way of believing in religion without questioning is

misleading. Unfortunately, plenty of people are the same in the sciences. These people believe that since some scientific laws are demonstrated to be true, we ought to believe in absolutely all science as if it were something equally reliable in a uniform way across all the different natural sciences. These people also believe that as all science is equally truthful, it is radically different from superstition and that we must actively defend science from superstition. This was the worldview of the Islamophobic scientistic antitheist bigots of the 2000s that were obsessed with logical positivism. Doing what they wanted to do with science or doing the same with religion is a mistake. The fact that some theories of a belief system are true does not necessarily mean all other theories of that belief system are equally exact or even true. Regarding scientific matters, it is very difficult for non-specialists to know what areas have been more replicated than others. That is why it is easy to do hasty generalizations as the scientistic antitheist bigots did by preaching a very strict dualistic distinction between the "believable science" and the "false pseudoscience."

What the scientistic bigots ought to have done was to study the different scientific theories across natural sciences and try to know which ones are more accurate and which ones are less so. That would have allowed them to understand reality and the Universe more clearly. Science is not just divided between truthful, accurate science and bullshit. Different descriptions of reality have different percentages of accuracy associated with them. The scientistic bigots should have necessarily forgotten about the pseudosciences, as it is obvious that they are not objective descriptions of nature, and one does not need a lot of education to understand that fact. Obviously, if their aim was to do political campaigning, it was not good to allow people to reason. It is better to talk about generalities to be able to manipulate the masses more easily. That is why the leaders of the scientistic bigots of the 2000s did not teach actual science to their acolytes, but only angry scripts. Their followers would have been more enlightened if they would have understood how statistics is used in science and technology, instead of just hating minorities and superstitious people and feeling proud of being rational by doing so...

Because of all these facts, if one is a real seeker of truth, and one is not attempting to change governmental policies, to empower some politicians, or to delude oneself with false spiritualities, one must endeavor to learn about science, including all its mathematical bits. Furthermore, one should know what areas of science are statistically more reliable than other ones. This of course cannot be done with all the subfields of all the natural sciences. There are simply too many of them! However, as sophist

Socrates the Elder did, we must be aware of our own ignorance. Maybe the reason why Jana the Refulgent was aware of the differences of credibility across different scientific disciplines was the fact that she was not a scientist. Therefore, she had less faith and trust in science than the faith and trust that scientists have. This is because scientists end up acquiring such faith and trust due to having already spent their whole lives engaged in a scientific specialty, so they obviously have a lot of faith in it. This is because they need to somehow justify all their effort, so they see their science as if it were the best that exists. It is a mere cognitive bias.

All this, of course, does not mean that magic does not exist or that it is useless to try to practice magic. In Findhorn, people believed that the existence of magic purely relied on their hypotheses about the "energy." If their pseudoscientific hypotheses were false, they believed that necessarily magic could not exist. That was an illogical reasoning. In ancient times, people believed in spontaneous generation to explain how flies are born. Now we know that in its current state, there is no spontaneous generation of life on planet Earth. Nevertheless, the fact that spontaneous generation is false does not mean that flies do not exist.

The hypothetical explanation of how a phenomenon happens and the phenomenon that it attempts to explain are totally different objects. One of them is a metaphysical object, an idea. The other one is a physical object, a reality that exists. Hence, they are not the same thing. The fact that the hypothesis is false does not mean the phenomenon does not exist. If you want to know why there are flies, we now know that they reproduce sexually, as we humans do. I am not against magic as a mysterious practice to perform miracles. I am against the Findhorn view of attempting to create metaphysical theories that go against science to explain what magic is and how it works. Metaphysical theories that explain magic as "energy" are also bad for the magician, as the prospective mage may end up becoming a proficient bullshitter that speaks all the time about "energy" instead of someone who performs miracles. Indeed, such false "energy" doctrines can waste useful time that can instead be better spent becoming more powerful.

If you read in ancient texts about the deeds of great magicians from old times such as Medea, Moses, Circe, or Jesus, you will never see the word "energy" written. They did not need that concept to perform magic, and neither will you need it. Scientists and engineers can make better use of the word. Indeed, to be a miraculous mage, you do not need to delude yourself by having a metaphysical theory that is at odds with the scientific worldview. Being a magician is good. Having a scientific worldview that describes nature quite accurately is good. Why not have both?

Even though the mechanism of how magic works is not known—and even though it is not even known if magic exists at all—it is worth practicing magic. It is worth practicing it for the same reason that mathematician Blaise Pascal said that we must believe in God YHWH (Allah) in his book "Pensées" (1669). This is my modified version of Pascal's wager but applied to magic. It may be that magic exists or that it may not exist. If we strive to acquire magical powers and it does exist, then we will obtain something helpful for life. If it does not exist, nothing bad will happen if we attempt to learn magic. It is better to end up having magic because of having an open mind than living without magical powers because of our blind faith in the belief that magic does not exist.

In the book "The Demon-Haunted World: science as a candle in the dark," astrobiologist Carl Sagan (1995) was amazed that people still believed in magic because according to him, technology has already performed greater miracles. I think Sagan was too privileged to understand us average people. Not everyone can benefit from technology to solve all problems, as technology is expensive and always the richest person or the government has access to the best technology, whereas the poorest ones are at a disadvantage. If someone powerful oppresses us—either our boss, the government, or criminals—technology cannot save us from such people because these individuals will always have access to better technology than us. And we should be frank, the greatest problem faced by average humans is the oppression, bullying, or emotional abuse we suffer from other people. That is why people still cling to magic. If it truly exists, it is not as classist as technology. If it does not exist, at least it is a hope in an otherwise hopeless world.

Even if class conflict is not involved, many poor people on this planet do not have access to as much technology as the richest citizens of this world. Poor people in developing countries do not even have enough technology to solve average health problems or the need to water their crops. Magic is their only option. Carl Sagan epitomized bourgeois thought. However, he did not think about himself in that way. Sagan had leftist views and wanted to reduce poverty in the world. He was just too naïve in thinking all governments of the world would have extra cash to provide all people with enough education to end scientific illiteracy and that in addition to that, they would have enough money to provide scientific and technological solutions to everyone. Such a scenario is extremely unlikely under the current political and economic situation. However, even if a few steps could be taken to improve scientific literacy and access to technology, the poor would still have unsatisfied needs, and spirituality may help them, even if just a little. Modern science and technology are

not perfect either. Sometimes even the rich have life issues that not even science or technology can solve. Spirituality is always there to make them feel a little less bad...

Even if Sagan was against the belief in magic, he was a good man. He was not mean. Unlike him, the men who after his death claimed to be his successors in the 2000s were not good. They were Islamophobic, racist, misogynistic bigots. This reminds me of Gina, the young woman with spectacular, stunning legs that I met in the Filosofiska Föreningen vid Uppsala Universitet. Gina said that originally, Jesus and St. Paul the Apostle were good men. Yet later, immoral people used Christianity as an excuse to perform all sorts of iniquity through wars, pillaging, unfair "Christian" laws, and the persecution of minorities. I think something similar happened with Sagan and his later supposed followers.

The influence that the Islamophobic scientistic antitheist movement had on Birgitta the First was noteworthy. When I first met Birgitta the First, she was an absolute religious fanatic because in 1990s Poland (the society where she grew up), Catholic religion was seen as the best social superstructure that exists. In her society, the human being that was considered as the best possible one was the perfect Catholic that lived following everything that the Church taught. When Birgitta the First studied university in the United Kingdom, the Islamophobic scientistic antitheist bigots were fashionable because President George Bush the Younger supported them to justify the atrocities that happened during his War on Terrorism that was fought in the Middle East.

The Islamophobic antitheist bigots were against religion, especially Islam. To please society and to be what society admires the most, Birgitta the First became an atheist and denounced religion as an evil and stupid practice. This showed me that Birgitta the First was a social puppet that did not have true convictions or an ability to resist temptation. When Asia the Mystic and I were tempted by an Islamophobic and scientistic society obsessed with logical positivism, we never stopped believing in our religious ideals. We were not led into temptation. Our magical powers even increased through our mystical experiences. Strangely, Birgitta the First did not just modify her beliefs to please society. She also paid a cosmetic surgeon to modify herself until she looked like the women that are deemed beautiful by society. Like my father, she paid so part of her nose was mutilated. After this, she underwent several other surgical procedures.

I believe the origin of all the unrighteousness displayed by Birgitta the First was a result of having the sort of emotionally abusive personality that society wrongly equates with empowerment. Unfortunately, most people equate violence with power, and power is, of course,

something desirable. Birgitta the First was ready to suffer the postoperative physical pain that happens after having had a cosmetic surgery to please society. I think a virtuous person should be the opposite. A wise person should be ready to suffer emotional pain to displease unrighteous society. That is because not conforming might be emotionally painful, but many times that is the best one can do.

The direst temptation that exists in the modern world is such that reaches us through marketing and normative social influence. Normative social influence is the conformity that happens when we do what most members of society do. Every virtuous person must oppose this type of temptation at this moment in history. This is why the modern holy person must study informal logic, marketing, and social psychology as much as possible to avoid being led into the traps of temptation. The aim of my daily philosophical study is to study such traps to know them. The only way to follow the teachings of Emilio the Sage and of Jana the Refulgent is to live differently from the rest of society.

On the other hand, the average member of society is a fool that always does what is fashionable to do and what others do, regardless of how good such fads are. This is why we must always doubt what society teaches us... The most important ethical principle is living to protect our individual philosophy and ideas from such people who want to indoctrinate us with ideologies that do not benefit us.

After being in Findhorn, I spent some time in Inverness, Scotland. I took a boat tour on Loch Ness. It is claimed that in the Middle Ages, this lake was haunted by a monster that killed people. When Christian missioner St. Columba was in Scotland, a man was in River Ness. Suddenly the monster appeared and attempted to kill the guy. St. Columba had miraculous powers that were granted to him by the Holy Spirit. Thus, St. Columba used his magic to exorcize the monster. He ordered the monster to not kill the man. The monster swam away.

In the 20th century, environmentalist Peter Scott and a fanboy of the monster formally described the famous creature as a new species that was previously unknown. They named it *Nessiteras rhombopteryx* **nom. inval.** You can read the funny description by Scott and Rines (1975), titled "Naming the Loch Ness Monster," in "Nature" 258: 466–468. They depicted the monster as a fat, hunchbacked grotesque creature. I do not like that character design. I wish it would have been depicted as a traditional, northern European medieval wyrm (dragon). The Loch Ness monster does not exist in real life and science does not acknowledge its existence. It seems to me that the authors of the pseudoscientific paper knew very well that the Loch Ness monster does not exist, because in the

protologue they compare it to other mythological monsters such as the gigantic *Megophias monstrosus* **nom. inval.** that is supposed to measure 30 m long.

Megophias monstrosus **nom. inval.** is one of the five marine monsters from folktales described by naturalist Constantine Rafinesque (1819) in his paper titled "Dissertation on water snakes, sea snakes, and sea serpents" that was published in "The Philosophical Magazine Series I" 54(259): 361–367. Rafinesque did believe that such beings existed because in the same paper where he described them, he also describes species that truly exist such as the yellow anaconda (*Eunectes notaeus*) and the sea snakes that François Péron saw in Australia. When I was in Bahía de los Ángeles, Baja California, Mexico, in 2005, a boatman told me that he saw a marine monster that was by far bigger than a blue whale (*Balaenoptera musculus*). He claimed that during some nights, the monster went out of the sea by slithering to the dry land. Arévalo believed what this guy said, but I did not. (If you want to know the meaning of "**nom. inval.**," please see the glossary.)

If you want to know everything on all sorts of monsters, you should read the marvelous essay written by renowned physician Ambroise Paré titled "Des Monstres et Prodiges" that was published in "Les Œuvres d'Ambroise Paré" (1585).

This is the end of my account of what happened during my Second Pilgrimage and of everything that I learned during that journey.

At the end of 2012, I visited several places in Mexico while joining the Christmas bird counts that Héctor Gómez de Silva recommended to me. At that time, even if he was a good friend of mine, I had not met him in person, only online using email (electronic mail). A Christmas Bird Count lasts only one day. The people who participate in it join small teams that visit different places in the whole area that is studied. The aim is to find the largest possible number of species. I participated in the following Christmas Bird Counts of 2012: Monte Mojino, Sonora; El Palmito (Reserva de la Chara Pinta), Sinaloa; and San Blas, Nayarit. Of all of them, the most surprising one was the one in Monte Mojino, Sonora, my first bird count. Moreover, I met there two very interesting persons: A young woman that was "trying to find herself" and a proficient birder. Therefore, I will write a detailed account of the Monte Mojino experience.

While I was in Álamos, Sonora, the place from where I would travel to Monte Mojino to start counting birds, I met a young woman named Elly. She was the daughter of the owners of the hotel where I spent the night. I really liked her when we went to have dinner together at the restaurant El Mirador. Elly was blonde. Her eyes were

blue. She was slender. Her belly was sultry and her innie belly button sexy. Her legs were graceful. She was taller than me. She compared her beauty with that of the Barbie dolls made by a company known as Mattel and that were used by girls to play with them. She loved to show off her bare tummy and her navel. That was sexually arousing to me.

Elly the Fair loved money, gold, jewels, and expensive, stylish clothing. She did not have any such goods, but she still aspired to one day have them. She suffered from melancholy and from an eating disorder. Elly the Fair believed in the worldview promoted by self-help gurus in their books because she believed that would heal her from her ills. Hence, she said she was "trying to find herself." I think self-help sometimes creates more problems than it solves. The reason is that before philosopher William James (1890), in his "Principles of Psychology," coined his concept of the "self-seeking impulses" and how every person has different selves, normal people were not trying to find themselves, as almost no one thought that there was more than one self-aware self per living person.

I am, of course, excluding people who suffer from dissociative identity disorder, who in fact do have more than one personality, but they are anomalous. When William James referred to the different selves, he did not refer to such ill people anyway. After the concept of the multiple selves in normal people was invented, many normal people have the need to find themselves. Why was it that in the many thousands of years that humans lived on Earth, no one required that until the concept was invented? I sometimes think one does not need to find oneself because it might be that a human is just one, not many. But that is something that I do not know—maybe in ancient times people needed to find themselves, but they never did that because they never imagined that they were more than one per person. I still think some social constructs make us more miserable because as ancient philosopher Epicurus said in his "Principal Doctrines," they create more needs than the needs we naturally have. As we have more needs to fulfill, it is easier for us to be miserable because we think we never have enough.

I am not saying Elly the Fair was ill because of not finding herself, only that the idea that some part of her was lost and that she needed to find it only made things worse by creating an extra problem that probably should not exist in the first place. Elly the Fair spent the whole day looking at social media posts on her telephone. I never met a person that spent so much time on social media, not even the narcissist professor who was the principal investigator in the lab that studied the evolution of octamer-binding transcription factor 4 (Oct4). Elly the Fair was very kind. She always wanted to help everybody. She was very humble and approachable.

Something that could be thought as a possible belief in two selves in antiquity was the ba and the ka in Pharaonic Egypt. The ba did not exist as an independent being until the person died, so Elly the Fair could not find her own ba. The ka was what keeps us alive, so Elly the Fair always lived with her ka, no need to look for it... Another related concept might be the Gnostic belief in a higher divine part of ourselves that is not within us, the so-called celestial twin. In Platonism, especially in the non-mathematical version understood by the Gnostics, there is a perfect spiritual form of the world that exists outside of this Universe, and then the physical world that one can perceive. In the divine counterpart of it, there are supposedly "Platonic forms" of each one of us, our celestial twins. This concept of the celestial twin was important in Manichaeism, as Mani's celestial twin instructed him in the tenets of his new religious movement according to the Manichaean text known as "On the Origin of his Body."

Yet, this divine twin was not like the Elly the Fair that Elly the Fair was attempting to find. She was not looking for a ghostly entity that dwelt outside of her body, but for an inner self that she did not know. This Gnostic concept is clearly something completely different. I think Plato himself did not believe in Gnostic Platonism. I guess we must understand his forms in the mathematical sense as Aristotle understands them in his book on "Metaphysics." That is simply because Aristotle met Plato. Plato lectured him. The Gnostics lived after Jesus, many centuries after Plato's death. Under Aristotle's version, the Platonic forms of physical objects are the mathematical principles that allow the Universe to exist as it is. Nothing more than that!

At Elly's house, there is a tall and gorgeous tree. It is a *Ceiba pentandra*. It was extremely old, by far older than Elly the Fair. This species of tree was considered holy by the ancient Maya. They depicted this tree as the axis mundi. The whole Universe was depicted in their religion as a *Ceiba pentandra*.

Years later, Elly the Fair was important in my life, but she does not appear in this book any more as a character.

To reach the place where we would count birds in Sonora, we had to travel in vans down a long dirt road. Traveling there took us an entire day. We finally reached a ranch that was found in a remote place in the Sierra Madre Occidental. It was the Rancho Santa Bárbara. To reach that place, we traveled through several ecosystems. At the beginning, we were in a tropical deciduous forest. As we went higher up in the mountains, we reached a *Quercus* forest. In the highest parts of the sierra, there was a *Pinus* forest. During nighttime, we used candles instead of electric lightbulbs because there was no electricity in Rancho Santa

Bárbara. There was no running water either. That night while I was in the Sierra Madre Occidental of Sonora, I met a student of ecology who was studying at the University of Arizona in Tucson. She also went to count birds with some of her classmates. She infected me with an illness known as mononucleosis. This disease spreads through human saliva. Mononucleosis is a fever that includes having swollen lymph nodes in one's neck and that leads to malaise. It is as if it were a long-lasting influenza, but not as nasty or lethal.

The symptoms of mononucleosis do not appear as soon as the Epstein-Barr virus (*Human gammaherpesvirus 4*) infects the human body, so I kept enjoying my birdwatching adventures without knowing that the viruses were reproducing using my cells inside my body. The night in Rancho Santa Bárbara before counting birds the next day was nightmarish. I described it to Asia the Mystic in a letter that I sent to her by email from San Cristobal de las Casas, Chiapas, six days after living that nightmarish adventure in Sonora. This is what I wrote to Asia the Mystic:

"I reached the camping site when it was almost getting dark. I ate dinner and then I went to sleep. There were about 15 people around and only three tents and a small, abandoned cottage. All the tents were full, so I had to sleep in the cottage with David, father of the fair one. We slept in different rooms inside our sleeping bags. In the middle of the night, I woke up due to noises of mice moving around me. I became afraid and started calling David, father of the fair one, who was in the adjacent room. Unfortunately, my voice woke up a bat that started to fly over my head. David, father of the fair one, then said: 'What happens, Peregrinus?' I said: 'Something is flying over my head!!!' He said: 'Do not worry, it is just a bat.' Later, David, father of the fair one, woke up scared, as a mouse crawled over him as he was sleeping!"

The next day I went to watch birds with an awesome birder named Richard Webster. He was a professional tourist guide who specialized in birding. He was able to determine all the species by their songs and alarm calls. He had with him special equipment to record them. It was a pleasant and lovely trip. We frequently hiked off-trail through the forest. We watched plenty of birds. Richard Webster met Phoebe Snetsinger in person before she died. He worked as a tourist guide for her. When I was 18 years old, the book of that lady motivated me a lot and I wanted to emulate her. Nonetheless, Webster, who met her in person, did not admire her. I asked him why. He said that the reason was that Phoebe did not know a lot about birds... He said that she only paid others so that they would identify them for her. He said to me that he admired me more because I did not know just about birds, but about all the disciplines of natural history in general.

I was surprised by his answer. But after thinking about that, I think Webster was right. Only trying to make a long list of birds is not admirable. It might even be dangerous for our health and safety as it was for Phoebe. There are indeed some things that are not worth it in this life. There are some battles that are not worth being fought... I would keep listing birds but prioritize my health and safety. I would not visit places full of criminals or with a lot of malaria cases. I would also not watch birds in excess. As it was written in the temple of the Oracle of Delphi: "Nothing in excess."

After my bird counts in Sonora, Sinaloa, and Nayarit, I ended up having nine new lifers in my life list. That is good not to be excessive... Such birds were the elegant quail (*Callipepla douglasii*) in the backyard of the house of Elly the Fair, the Williamson's sapsucker (*Sphyrapicus thyroideus*), the Arizona woodpecker (*Dryobates arizonae*), the gray-crowned woodpecker (*Colaptes auricularis*), the Mexican parrotlet (*Forpus cyanopygius*), the tufted jay (*Cyanocorax dickeyi*), the Louisiana waterthrush (*Parkesia motacilla*), the red-faced warbler (*Cardellina rubrifrons*), and the red-headed tanager (*Piranga erythrocephala*).

Héctor Gómez de Silva, the man who recommended me to attend the Christmas bird counts and who was a coauthor of a paper that I wrote, was a man who was born in Mexico many years before me. He lived in the United States of America where he became a birdwatcher. Later, he lived in Kenya where he watched plenty of different species of exotic birds. In Kenya, he also saw the iconic wild African megafauna, such as the one that can be seen in my favorite movie, "The Lion King" (1994). He watched birds in Mexico at a time when such a pastime was not yet popular and there were more birds. The reason why there were more birds is that at that time, the anthropogenic impact on the environment was not as devastating as in later years. He worked studying the trees and lianas of Papua New Guinea. Like Ash Pryce, the Edinburgh illusionist, Gómez de Silva had something in common with naturalist Alfred Russel Wallace. However, in this case, it was not being interested in spiritualist religion but being passionate about the birds-of-paradise. Looking for birds-of-paradise and other fascinating species in Papua New Guinea allowed him to be acquainted with plenty of different cultures and languages of the Indigenous Peoples who live on that multicultural island.

He studied biology and got his PhD in ornithology at the Universidad Nacional Autónoma de México. His supervisor was Rodrigo Medellín Legorreta. His PhD thesis was titled "Reglas de Ensamble Generales en las Comunidades de Aves" (2001). He worked as a tourist guide specialized in birding. As part of his job, he traveled to a lot of different countries. Thus, he had

innumerable fantastic adventures and got a gargantuan life list of birds. Gómez de Silva has always been an important influence for me as a birder. That is because he loves his hobby a lot. I always kept in touch with him in a friendly way using email.

On Friday the 22nd of February 2013, the British Broadcasting Corporation (BBC) broadcasted the first episode of the nature documentary "Wild Arabia." One of the guys involved in this series was naturalist Toby Nowlan, my former collegemate at the University of Edinburgh. He was able to fulfill his dream of working making wildlife documentaries. Unfortunately, to keep Attenborough's legendary reputation, as a marketing strategy, his assistants are not as acknowledged as they deserve.

In 2013, once I stopped being ill from mononucleosis, I went to watch birds in Guatemala. There I saw a black hawk-eagle (*Spizaetus tyrannus*), an orange-breasted falcon (*Falco deiroleucus*), and a lovely cotinga (*Cotinga amabilis*). The lovely cotinga was used by the Aztecs and the Mayas in their feather art. When I was in Guatemala, I rented a car. It was a Kia Rio EX 2013. I rented it from the company Avis. I had a car accident while I was driving on a dirt road full of stones. The car fell over a rock that hit the gearbox, so the car stopped working. I stayed close to the damaged car in the middle of the countryside until it was night. At that time a man had mercy on me and dialed the insurance company where the car was insured. A tow truck arrived. It picked up the car. The tow truck returned me to my hotel in Panajachel. The employees of Avis told me to keep traveling around the country and that they would eventually tell me how much to pay. Unfortunately, it was a trap. They did that to have enough time to sue me so I would be banned from leaving Guatemala until I paid the total price of the car as if I were buying it new. Nothing but the gearbox was damaged, but these evildoers decided to make me pay for the whole car. That is how they got money from tourists who visited their country. They extorted me by banning my exit from Guatemala.

While my parents paid the ransom by bank wire transfer so I could leave Guatemala, I was extremely depressed. Even if I could travel all over Guatemala during that time, I felt trapped and far away from my country. Fortunately, during that time, I met a young woman from Sweden in Panajachel. Her name was Evelina. She made my time there less miserable. I traveled together with her in Guatemala. The ransom reached the Guatemalan bank, and the unrighteous bastards allowed me to travel back to Mexico. With such unfair laws and government, it is not surprising that so many undocumented illegal immigrant Guatemalans are ready to face all the dangers of the deserts of Mexico to reach the

United States of America and escape from Guatemala.

Evelina was a psychotherapist. She decided to study psychology to know why she was different from other people. Such differences involved her seeing monsters and demonic apparitions. The apparitions that she saw scared her and made her feel very afraid. No one else was able to see the apparitions that she could see. The strangest fact about her was that she worked as a child psychotherapist to help them to heal from their mental problems in a hospital. She said that she always spoke to the children about evil, supernatural demons. I think she was scaring the children, as Madame Klahr frightened me when I was studying first grade in elementary school. I said to Evelina that scaring children was not nice... She said she was not scaring them; she was only allowing them to be mindful of the supernatural menaces that exist in this world.

Even though Evelina was a bit strange, she was a good person to me. She behaved very well in front of other people and while we were walking down the streets. Her weirdness was only obvious when I talked to her in private. We sightsaw Antigua Guatemala pleasantly. I could explain everything we saw to her because Guatemalan culture is very similar to Mexican culture. Furthermore, I could show her the Catholic churches quite well because I knew about Catholic religion.

That same year, I learned to do bird banding. That was an activity that Siri Schmiterlöw recommended I do two years before. I banded birds in Sweden and in Austria. Siri Schmiterlöw told me that she was doing that in a place named Kvismaren, Örebro, Sweden. In that place, she was able to find in the mist net a Eurasian wryneck (*Jynx torquilla*). She banded it. As I had been searching for that bird for a long time to see it in real life and I had not yet seen it, I thought it would be interesting to learn to band birds in Kvismaren. When I contacted the persons working in the Kvismaren Bird Observatory, they told me that the observatory was already fully booked. Nevertheless, they said that I should try contacting the persons at the Lake Ånnsjön Bird Observatory, Jämtland, Sweden. They told me that in that location, they for sure had places. I went to the Lake Ånnsjön.

Lake Ånnsjön is a body of water (H_2O) that is in the middle of the mountains. It is surrounded by *Betula* forests, but in the tallest peaks of the mountains found around it, which are beyond the tree line, there is an alpine tundra. At the entrance of the biological station, there was a dried herb (*Valeriana officinalis*) bundle hanging upside down. It was an amulet to protect the people who worked at the station from witchcraft and accidents while working in the field. The project of the observatory was banding great snipes (*Gallinago media*). We had to hike up the mountains to the place

where the leks of the great snipes took place. Such leks happen in the tundra and in the mountainsides full of little streams. As it was one of the last spring days, the night was like a cloudy sunset... Sunlight did not completely disappear throughout the evening. It seemed as if midnight was like a sunset. One by one, the great snipes were trapped in the mist net. The researchers picked them up from there and banded them. The bird bands had a device which produced a signal that could allow the researchers to find out where the birds were. During the daytime, we rested.

The next night, I was assigned an adventurous task. I was going to explore the tundra looking for unknown lek sites of great snipes. That was the most surreal and dreamlike night that I have ever had in all my life... I hiked up a mountain slope together with other volunteers. A map and a handheld GPS (global positioning system) unit were given to me, so I could hike the area that I had to explore without getting lost. When I was hiking up the mountain with all the volunteers, we quickly reached the tree line while going toward our destination. The night was cloudy. The sunset that would last a whole night, since we were very far north, allowed for everything to be lit by a faint and gloomy light. The magnificent rocks of the mountains that were only inhabited by tiny herbs were still covered with the snow that fell since the last blizzards. We listened to the song of a bluethroat (*Luscinia svecica*) just before reaching the place where each volunteer would walk in a different direction. When we reached the STF Storulvån Fjällstation, we bade farewell to each other to start exploring the tundra by ourselves.

In the beginning, I had to follow the southern trail that leads to Spåime. Nonetheless, when I reached a place marked in my handheld GPS unit, I had to hike off trail through the tundra to survey the route that I had to follow. Then, I experienced something which I would be more inclined to believe was a dream than a real-life occurrence. It was the most amazing landscape my eyes have ever seen. The night was overcast, and I was on top of a high plateau. It was an extremely immense, flat moorland. All I could see there was the extremely small herbaceous vegetation, and the mountaintops covered by snow that surrounded me. As it was getting late, not only did the overcast sky look gray, the whole moorland populated by tiny grasses and herbs also looked grayish. It never got dark enough so I would be surrounded by darkness. Therefore, I was hiking through the immensity in the semidarkness. Only the snow patches that remained as vestiges of old snowstorms contrasted with the gray landscape that was produced by the dim light of that night that was never totally dark.

Every time I crossed a bog; it was difficult for me to walk because the mud slowed down my steps. As soon as I reached the dry land and I looked around me, I noticed that I was the only human being in that dreamy landscape. The darkest time of the night, the midnight, was as if I had accessed an unreal fantasy world. Nothing was well lit, but I could still see all the huge plateau, even the snowy mountains that surrounded it. It was like that very strange moment that happens during every sunset when it is difficult to say by staring at the sky whether it is daytime or nighttime. It usually lasts a few minutes, but at the latitude where I was during that night, and in that tundra, it lasted roughly three hours. My thoughts when I was alone surrounded by immensity were important for my experience. I was utterly speechless. It was incredible to think how my initial wish to band birds led me to be in that place that seemed totally different from the Universe where I lived all my life, but that in fact was merely a real-life landscape that was previously unknown to me. However, it still looked like a journey to the innermost part of my mind.

Nevertheless, not even the strangest lucid dream could have included such a bizarre landscape. As in Putla, Oaxaca, Mexico, I had to have absolute faith in my handheld GPS unit, because if it stopped working, I would be lost, as there were no towns or cities in this wilderness that reached the horizon. I only listened to the silence of that endless sunset that was occasionally broken by the sound of the wind or by the song of a ptarmigan (*Lagopus lagopus*). I hiked during the whole night and early morning.

I think I should start writing a natural history diary that would be similar to "The Country Diary of an Edwardian Lady," which was written and illustrated by Edith Holden (1977).

Anyway, the next place where I was a volunteer banding birds was a wetland not far from Hohenau an der March, Austria. In the biological station at Lake Ånnsjön, Sweden, I was engaged in searching for lek sites of great snipes (*Gallinago media*), and later in tracking the banded birds with a small parabolic reflector that detected the waves sent by the bands. Nevertheless, I had not yet handled birds with my hands. In Hohenau an der March, I indeed handled birds after having seen the banding techniques in the biological station of Lake Ånnsjön. The Hohenau an der March bird observatory was in a marsh that was surrounded by agricultural land. Behind the marsh, there was a riparian forest that was in Slovakia. It was inhabited by a family of black storks (*Ciconia nigra*). The director of the observatory was Matthias. He was assisted by two young women. Their names were Flora and Martyna. They three taught me how to check the mist nets several times a day to look for birds there. They taught me how to carefully free the birds from the mist nets. After having done this, they

measured their lengths and weighed their masses. They also looked for how much fat they had, or how muscular they were. In case the birds were passerines, they blew on them to see if they had a brood patch. It is used by females to warm eggs during incubation.

After having recorded all the scientific data, they banded the birds, or they wrote down the number of the band on the bird in case the bird was already banded. There was a bluethroat (*Luscinia svecica*) that had already gone to Africa and returned from there many times. It was the eighth time it had returned according to the records of the observatory! Frequently, there were ectoparasitic insects that belonged to the family Hippoboscidae in the birds. The most common one was *Ornithomya avicularia*. Whenever the young women found one of these creatures while handling the birds, the insect flew from the bird's feathers to the body or the face of the ladies! Even if these dipterans cannot parasitize humans, it was impressive to see that! During the nights, Matthias went to sleep at his home in Vienna. I slept during the nights inside the observatory in the same bed as Martyna and Flora. They were my bedmates. I can remember that at night, the moonlight was reflected in a spiderweb that was found above the only bed of the observatory. It made the silk of the spiderweb look as if it were made of silver. One day, in one of the mist nets, we found a bird that was a lifer for me. It was a great reed warbler (*Acrocephalus arundinaceus*). However, that was not the most amazing experience that I had in the observatory. What was truly amazing was seeing the skin lesions of a garden warbler (*Sylvia borin*) that suffered from avian pox. I told Flora to wash her hands after handling the ill bird to avoid infecting other birds with the *Avipoxvirus*.

During that time, something unusual happened. An American spy traveled to Hong Kong to betray the government of President Barack Obama. He worked for that government. The government publicly sanctioned laws to protect the privacy of the citizens as a right. Yet, the traitor spy publicly denounced to some journalists that the government hypocritically broke its own laws by spying on the electronic communications that happened among citizens. In this way, it was deliberatively violating the rights that it was supposedly protecting. The spy (named Snowden) had to flee to Russia. Before Snowden, conspiracy theorists claimed such things were happening, but almost no one believed them. Nevertheless, after Snowden's factual disclosure, everyone knew that surveillance was greater than they imagined.

Jurisprudence

Asia the Mystic studied plant biology at university, but she ended up becoming a professional computer systems engineer. This shows Jana the Refulgent was right when she taught me that we must be flexible. This is done by learning about everything and by being ready to play any role that would be needed in life. The reason for this is that we never know what we are going to do in life. Many times, we will end up doing what we know less. To avoid having impostor syndrome, the best is having a broad general knowledge and efficient study methods such as the ones that Jana the Refulgent taught me. These methods will allow us to learn anything quickly. Indeed, we cannot just trust our own formal education. We must be ready for any change that might happen in our lives and to know how to adapt to it.

The Stoic philosopher Epictetus famously observed in his "Enchiridion" that life resembles a theater play. Jana the Refulgent knew that to be successful at social interactions, people cannot simply behave displaying their real personalities and natural conduct. A social interaction is a theatrical play that is staged in front of other humans. When Jana the Refulgent was living in Indiana, United States of America, she was part of the North Newton Drama Club, the theater society of her high school. She acted in several plays and musicals. She did that because she liked being an actress. However, she became aware of something peculiar. She noticed that if she used her theatrical skills in everyday social interactions, she could induce the kind of behavior that she wanted to see in her interlocutor. This did not always happen when she behaved naturally while being herself.

A lot of the teachings that she gave me when I was inside her bedroom with her in Cambridge involved training me to be an actor. She taught me what she learned in her drama classes when she was in the North Newton Drama Club. She was able to modify these skills to use them in her everyday life. That is something that I learned from her, to have a theatrical personality. This teaching that Jana the Refulgent gave me shows that all our social interactions are applied acting techniques that we use to induce a response in our audience. This audience is the people that surround us. Due to this fact, the behavior of good people is not the only theatrical play. The behavior of bad people is also based on acting, but a villain role to attain evil ends. All the social interactions of cruel people are learned mind games. That is why it is of utmost importance in my daily philosophical study to know the mind games used by evildoers, such as the silent treatment, gaslighting, the argumentum ad baculum, &c. There was no better training to be prepared for the coming of Birgitta the Second than that. This knowledge of deleterious mind games is also useful to

protect us from powerful politicians that attempt to manipulate us through social media or media outlets. Their manipulation techniques are also grand theatrical plays.

According to Asia the Mystic, many biblical stories and other later Christian myths are not true stories that tell us about real life events that happened in the past. They are metaphors about the lives of the faithful. As a result of this, we should not interpret the scary Loch Ness monster as a creature. The Picts, the people who were attacked by this monster, were pagans. Therefore, according to Christians from the Early Middle Ages, they were people who lived wrongly. For them, the correct way of living was following Christian ethics. Hence, according to Christians, the Picts were at the mercy of sins. The Loch Ness monster was thus the symbol of sins.

That is why in this story St. Columba exorcized it, because in real life, he introduced to Pictland what he considered the right way of living. I do not agree with the Christian idea that its morals and faith are superior of that of other peoples. It is simply a different culture among many. Nevertheless, the Christian myth of the Loch Ness monster indeed shows us something important. It shows us that there are cognitions and behaviors that we have that can eventually become great evils for us, as monsters that want to eat us. It also shows us that in some cases, there are certain ways of thinking and behaving that can prevent such monsters from destroying us.

When I met Elly in Álamos, Sonora, she was not important to me. She was just one more pretty woman. Nonetheless, as time went on, I knew her well, I loved her, and I got to know her deeply sad but also very kind soul. Poor Elly... In this book, I did not write more about her, simply because I am not discussing the right time...

Elly grew more important to me. This was merely because time did not allow me to meet her well at that moment, only later. It is peculiar how time restricts our perceptions. Time has the property to restrict what we say, what we think, or what we do. Medieval people always had in front of them the ultraviolet light that is produced by the Sun, but they could not speak about it simply because it was not yet the time when scientists discovered it. We can never perceive reality as it is. We are always restricted by what the people of our time say about reality. Jana the Refulgent had a lot of faith in the scientific revolutions, and she was overly excited by them. She was right to be thrilled by them, because the scientific revolutions are what culturally move time ahead by widening our perception of reality. And even though there would not be important scientific revolutions, the mere gradual improvement in scientific knowledge changes our perception.

Richard Webster admired the people who had knowledge more than the people who had money. This is a very different opinion than what most people think. It is especially a very different opinion from what most Americans think, even though Webster was American. I am stating this because an American tourist guide that worked in Yulara, Northern Territory, Australia, told me that in her country, people valued being rich more than every other attribute. I think this belief of Webster is very wise because when Jana the Refulgent taught me what she knew, she never told me that her doctrine was going to make me wealthy. Her teachings only meant to turn me into a sage. This means someone with a lot of knowledge who can apply his wisdom to everyday life. It is of course true that Jana the Refulgent is a woman that has by far more money than the average person, but this is not why she believed what she said. She thought like that because she was a philosopher.

Among the rich and among the poor, there are always people who are eager to get a lot of money. This is not only common among the rich people—in the dialogue "Critias," philosopher Plato says the following quote about the golden race known as the Atlanteans: "They despised everything but virtue, caring little for their present state of life, and thinking lightly of the possession of gold and other property, which seemed only a burden to them." Modern philosophers, such as Jana the Refulgent and I, are the same. We are the new Atlanteans.

In the oldest Christian tombs, it is common to find peacocks (*Pavo cristatus*) depicted in mural paintings. In this way the first Christians depicted the "birds of paradise," such as the ones that are mentioned by Jesus in the apocryphal "Gospel of Thomas." As a matter of fact, in modern Orthodox Christian monasteries in Greece, it is still common to see that the monks breed peafowls because they claim that they are the "birds of paradise." Most people in modern times do not use the noun "bird-of-paradise" to refer to a peafowl, but to refer to the birds that belong to the family Paradisaeidae, such as the ones that were loved by Alfred Russell Wallace and Héctor Gómez de Silva... Both looked for them. Wallace wanted to kill them to collect them for scientific studies. Gómez de Silva wanted to see them to write down more names of birds in his life list and in that way quench his collector's need to see more birds. However, both were seekers of birds-of-paradise. Is it not the case that all us humans are seekers of Paradise? This seems like a fallacy of equivocation because a "bird-of-paradise" and "Paradise" are not the same.

Nevertheless, metaphorically, they can indeed be the same. Both nouns mean something marvelous and rewarding that is the prize that we get for our arduous efforts. For the faithful, Paradise is the award won for having lived a holy life. For birders, the

bird-of-paradise is the award won for having traveled far away with a lot of hardship involved in their journey. I can dare to say that since the time of existentialism, as a response to nihilism, people live trying to somewhat find Paradise. They live attempting to create a meaningful life for themselves by achieving something rewarding and marvelous. I believe such a desire is also involved in my desire to learn when Jana the Refulgent taught me. She also promised me "Paradise," or maybe even the "bird-of-paradise." She promised that by living according to her teachings, one could acquire all sorts of marvelous experiences and rewards in life. These good things would not be attained after death, such as the Paradise of the ancient Christians, but during this life. According to me, the teachings of Jana the Refulgent were the bird-of-paradise that I ought to follow so the gates of the earthly paradise were opened to me. The earthly paradise is not a geographical place; it is an inner place within the mind of humans, a mental state.

I did not like how Evelina scared the children with stories about monsters and demons that she was sure truly existed. Nonetheless, Asia the Mystic agrees that there are plenty of different demons and supernatural evil beings. According to her, some spirits simply dwell in nature and do not have any interaction with humans. Other spirits interact with people in playful ways such as pranking us. Sometimes, these spirits grant wishes to people. Other spirits are the evil angels of the Devil that, according to her, have a mind but do not have a body. According to Asia the Mystic, in fact, we should not fear that the evil angels may appear to us to scare us because they seldom contact humans in a visible guise. She claimed that their true menace involves how they advise us to act immorally and to sin. According to Asia the Mystic, the struggle against these angels is an inner struggle of not giving into temptation. I think that it is impossible to know with certainty whether all the myths that Asia the Mystic preached were true or false. But even if they were truthful, it does not justify that Evelina would scare the children by telling them about demons and monsters.

In case the evil angels would only interact with us by suggesting us to behave iniquitously, then we should not fear them, we only must defeat them by acting in a righteous fashion. If Asia the Mystic is wrong, there is simply no excuse to scare the children with demons because they do not exist. If we forget about what Asia the Mystic said and we simply analyze Evelina's ideas by themselves, we ought to accept that there is no reason to fear the monsters either, because supposing that they would truly exist, they are so scarce that almost never do humans get to meet them in person...

The spider (*Araneus diadematus*) from Hohenau an der March... The silvery light

of the Moon was reflected in the shiny, silky spiderweb. The life of a philosopher should be the same. I think that Jana the Refulgent is like the full Moon. She reflects the light of wisdom. My life was like that spiderweb because I could catch the silvery moonlight and reflect it in all my actions.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

CHAPTER 27. *PISUM SATIVUM*

Hohenau an der March, Austria, is not far from Brno, Czech Republic. That place is famous because there is a monastery there, where Mendel performed his famous experiments with peas (*Pisum sativum*) that were the beginning of genetics. As I was in Hohenau an der March, I wanted to visit Brno. In the train station of Brno, I met an attractive young woman that was a blue-eyed blonde. On one of her arms, she had a tattoo that was a Chinese dragon surrounding some human skulls. It was a colorful, medium-sized dragon. It was not dark and enormous such as Alexandra's tattoo. The woman told me that her name was Šárka. I started to chat with her, and we became good friends. She told me that she wanted to show me her city. We took a taxi to go to the hotel where I would be staying. I left my luggage and from there, we went to sightsee the city and have dinner together. By nighttime, we were already French kissing each other passionately. We were also making out in the streets of Brno as if she were my significant other. I did not suspect that something anomalous could happen with Šárka, as before, I had already met Sanna while traveling in Queensland, Australia, and I had a lot of fun with this young woman that I found sexually attractive.

Šárka and I hiked up a hill where there is a magnificent building, the Špilberk Castle. From there we saw the panoramic view of the city. There we found three young Czechs, two guys and a lass. Šárka and them did not know each other. I did not know them either. We started to speak with them. While I was chatting with the two dudes, Šárka was chatting with the young woman. Afterward, the woman approached me and said, "You should be very careful with Šárka. She is not a good person. This woman has just confessed to me that she wants to have sex with you and then sleep with you in the same bed. When you're fast asleep, she is going to steal all your money."

When Šárka realized what we were talking about, she approached us and started to hit the Czech woman with her fists and to kick her for warning me about the imminent danger that I was facing. Šárka was able to throw the woman to the ground. Because of that, she hit her head with a metal rubbish bin when she fell. Then, when Šárka was going to kick her and stomp on her while she was lying on the floor, the two young men that were friends of the lass started to hit Šárka at the same time. It was a fight of two tall and strong men against a shorter, slender woman. Due to that, she was not able to hit them, but they were indeed punching her viciously. When I noticed that

***Pisum sativum* Linnaeus, 1753 (Fabales: Fabaceae)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 864.**

no one was paying attention to me, I started to walk away very slowly and without making any noise. The darkness of the night helped me to be unnoticeable and, in this way, to flee from that frightening situation. When I was somewhat far away, I ran away as fast as I could. While I was running down the hill, I could still listen to the screams of Šárka, who was suffering from a lot of pain and was furious as she was still being punched by the two men at the same time. I took a taxi from the train station to the hotel. That is how that date finished...

The next day, I visited the Bazilika Nanebevzetí Panny Marie, the Brno Catholic Basilica. This church complex includes a monastery, the Mendel Museum, and the archeological ruin of the greenhouse where the famous monk performed his genetics experiments. It is surprising how Mendel, continuing the work of his precursors Joseph Gärtner and Gottileb Kölreuter, was able to find the laws of inheritance without using any sophisticated equipment. In his experiments, he just observed nature carefully. He was obviously one of the most important humans to have ever existed. If you want to know what he discovered, please see Appendix C in this book. My favorite exhibits in the museum were the golden Catholic priestly regalia and the marble sculpture of Mendel with his pea plants (*Pisum sativum*) that was made by Theodor Charlemont (1910).

In the door of the famous basilica, the four elemental spirits are depicted. Each one of them is associated with one of the four elements that were defined by pre-Socratic philosopher Anaximander. These elements are fire, air, water, and earth. Now it is known that that there are not just four chemical elements. In fact, 118 of them have been discovered so far. Of them, 94 are naturally occurring. None of these 94 elements are the fire, the air, the water (H_2O), or the earth. Anaximander's hypothesis was falsified by later scientists. However, for many centuries, it was a scientific hypothesis that could not be falsified, and it was very influential. The hypotheses that have been demonstrated to be false are not something bad because science can develop only by postulating new hypotheses. Some end up being true whereas others are necessarily false. Some others are not entirely true, but they are, in part, right.

These are the elemental spirits that were depicted on the door of the basilica: The earth elemental was the Asian elephant (*Elephas maximus*); the water elemental was the fin whale (*Balaenoptera physalus*); the fire elemental was the Western dragon; the air elemental was the golden eagle (*Aquila chrysaetos*). I was awed by looking at them because the only list of elementals that I knew was the less zoological one suggested by Paracelsus. His list is more based on fairytales. He suggested that list in his book

titled "Ex Libro de Nymphis, Sylvanis, Pygmaeis, Salamandris, & Gigantibus &c." (1566). In Paracelsus's version, the fire elemental is the fire salamander (*Salamandra salamandra*), the air elemental is the sylph, the water elemental is the undine, and the earth elemental is the gnome. The last three elementals are people that are characters of fairytales for children. In fact, both lists can be equally truthful at the same time. One does not need to choose one over the other.

Aristotle, who invented the concept of "elemental" in his "History of Animals," says the fire elementals are the beetles that belong to the genus *Melanophila*. Nevertheless, he later says in the same treatise that the fire salamander is also a fire elemental. Therefore, each one of Anaximander's elements can have more than one elemental. As a result of this, now I shall make my own list of elemental spirits. As the first list of elementals included animals, and the second one fairytale characters, my own list of elementals will include only prokaryotes, something totally different...

My choice for the earth elemental is a bacterium that belongs to clade Bacillota that is known as *Desulforudis audaxviator*, because it has been found living 2.8 km below the surface of the Earth in the deep biosphere. Under the ocean floor, there are bacteria living even deeper in the Earth's crust, but to my knowledge none of them have been named. My choice for the water elemental is a bacterium that belongs to the clade Pseudomonadota that is known as '*Candidatus* Pelagibacter ubique,' the most abundant species of organism that exists on this planet. It lives in the seas. My choice for the air elemental is a bacterium that belongs to the clade Pseudomonadota that is known as *Pseudomonas syringae*, because it helps to produce clouds in the sky. My choice for the fire elemental is an archaeon that belongs to the clade Methanobacteriota that is known as *Methanopyrus kandleri*, because it is the cell that is known to live and reproduce at the highest temperature (122 °C). (Please see the glossary to know what "*Candidatus*" means.)

I visited a town in the Czech Republic known as Lomnice nad Lužnicí. From there, I walked to a lake to see a very strange carnivorous plant. It is known as *Aldrovanda vesiculosa*. Its leaves are adapted to be "mouths" used to trap aquatic insects. The weirdest fact about this plant is not that it has many "mouths" that are quickly closed when it traps an insect. What is surprising about it is that it does not have a root, so the water currents of the lakes and ponds where it lives move it freely. It is not just a plant that catches insects by closing its "mouths" at great speed, but it also floats freely in the water without a root that would keep it attached to a single place. It is a plant that lives as if it were an animal. There are even animals that need to live

attached to the same surface throughout their lifetimes, so *Aldrovanda vesiculosa* enjoys even more freedom than many animals. As it does not have a root, I suppose it obtains all the nutrients that it requires from photosynthesis and from the animals that it devours. If we would be ready to believe in the Aristotelian idea that animals have souls different from plants' souls, as it was written by Aristotle in his treatise "On the Soul," we would conclude that *Aldrovanda vesiculosa* is a plant that has an animal soul!

Something that is extremely surprising about Prague, Czech Republic, is the "Astronomical Clock" built by Mikuláš of Kadaň and Jan Šindel (1410). The reason why it is so amazing is that it is a machine that has medieval automata that move in a charming way using vintage technology. When an o'clock time is reached by the hands, the Santa Muerte (the angel of death) that is depicted as a human skeleton rings a bell. At that very same time, a procession of some of the early saintly founders of Christianity can be seen through the windows. At the end, a rooster (*Gallus gallus*) made of metal crows.

During these holidays, I also went to Ibiza, Balearic Islands, Spain. Before departing in a ship from Barcelona, Spain, I took a tour by bus in Barcelona where I saw the famous Catholic church known as Basílica i Temple Expiatori de la Sagrada Família. At that time, it was still being built. 131 years had passed since its construction was started.

In the Port of Ibiza, there is an incredible archeological museum because Ibiza was an important island for Pharaonic Egyptians, Phoenicians, Romans, Spaniards, Arabs, and Berbers. My favorite exhibits of this museum were the eggs lain by ostriches (*Struthio camelus*) that were painted by proficient artists, as well as the Pharaonic Egyptian jewelry. I visited the nightclubs and the parties in San Antonio and in Ibiza. I had a lot of fun! (If you want to listen to a song played at these parties, please listen to "Ninetoes - Finder (Official Video HD)" (2013).) At that time, there were no dress code laws that ruled the outfits of girls and women in the Balearic Islands; so, all British girls that were tourists who had sexy bodies wore bikinis regardless of the place within San Antonio or Ibiza where they would be. It did not matter either what they would be doing, or the time of the day or the night, they were always showing off their hot bodies. The best girls were only wearing bikini bottoms and nothing else. They were showing off their breasts and their nipples in public while they were walking down the streets.

The attitude of all these girls and young women with respect to sex and sexuality was very open minded. They did not have any shame or inhibitions whatsoever while they were in Ibiza. For them, sexuality was something to have fun, and they were

nymphos. I loved their lack of shame and their beauty. On the beaches, one could see totally naked ladies that were not ashamed to show off in public their belly buttons, their legs, their breasts, and their vulvas.

During such holidays, I traveled by train from Hamburg, Germany to Copenhagen, Denmark. Something amazing happened during that train journey. At some point, the train boarded a ferry. The ferry crossed the sea with the train on board! After that, the train continued traveling on a normal railway.

Asia the Mystic from Słomniki, Poland, was born on Tuesday the 24th of June 1986. She was born during the viceroyalty of General Wojciech Witold Jaruzelski, first secretary of the Polish United Workers' Party. He was a vassal of Mikhail Sergeyevich Gorbachev, general secretary of the Communist Party of the Union of Soviet Socialist Republics. When Asia the Mystic was born, the Sun was in the constellation known as Gemini, the divine twins. The Moon was in the constellation known as Capricornus, the Suhur-mash-ha, the holy beast of God Enki that is half fish (*Carasobarbus luteus*) and half goat (*Capra hircus*). (To find out why this information does not agree with the signs of the zodiac of astrology, please see Appendix B.)

Asia the Mystic was born in a Marxist dictatorship that was overthrown a few years after she was born. After totalitarianism was abolished, her country turned into a free democracy. Hence, she grew up thinking Marxism was something evil. Nonetheless, she shared some concerns with the Marxists. She agreed with Karl Marx that modern life is characterized by alienation. Marx wrote this in his "Ökonomisch-philosophische Manuskripte aus dem Jahre 1844." Alienation means that we as humans do not feel good in our current industrial or post-industrial societies that keep us away from nature, traditions, close-knitted communities, fulfilling activities, and from having the power to decide what to do. It leads to feelings of isolation in the middle of a crowd and a lack of a genuine life purpose. However, Asia the Mystic disagreed with the Marxists in their solution that involved a revolution that would change society. Asia the Mystic thought that the solution to end alienation was to look for the higher powers that rule the Universe.

By contacting these magical forces and allowing them to show their miraculous power in this world through us, our mind is cleansed from all sense of alienation, replacing it with a sense of unity with the Universe. Asia the Mystic herself said that she used to feel alone in the middle of all people until she allowed the Holy Spirit to possess her so she could become a prophetess. According to traditional Marxist doctrine, Asia the Mystic was simply using religion as a drug to substitute

her misery with a false sense of happiness. However, Asia the Mystic did not find her divine fulfillment in the usual experiences that most religious people have, the ones criticized by Marx. She found solace in the magical powers and supernatural experiences that only the blessed mystical initiates reach. She claimed that she obtained her universal connection and the meaning of her life directly from the divine forces that rule the Universe, that are beyond science and reason. She thought that to get the full benefits of Heaven, one needs to go beyond the regular religion criticized by Marx and become a practitioner of mystical arts. She thought that the belief in the redemptive properties of political revolutions was, in fact, just a mere placebo for people who do not realize the true divine nature of the Universe and find false hopes in idols made by humans.

On Friday the 18th of October 2013, an infamous mob boss, named Arellano Félix, was killed in Mexico. He was killed by a clown. This is true, a clown killed him...

When I was back in Mexico, I went to the Mexican Botanical Congress in Tuxtla Gutiérrez, Chiapas. I went there because I was invited by the saintly Professor Hilda Flores. What impressed me the most about this congress was how politicians control the minds of brainwashed, young Mexican students. Almost all the rhetoric of the organizers contained messages that included the political ideology that was part of political campaigns. This congress was a camp whose aim was massive political indoctrination. As a matter of fact, biological education in the United Kingdom and Sweden was not as controlled by governmental ideology. I am happy that I did not study biology in Mexico. In that way, I kept biology and politics as separate fields of inquiry. They are very different topics because politics are subjective, and they depend on the person who is in power. On the other hand, science is more objective, and it depends on the result of experiments that are statistically analyzed. The governor of the State of Chiapas was invited to the opening ceremony, but he did not go. He was an arrogant and powerful politician and the husband of famous singer Anahí Puente, a member of RBD, a pop music group.

The governor did not just avoid going to the opening ceremony, but he did not even tell the organizers that he would fail to attend, even though he promised to go and had the organizers include his speech in the program. The governor did not go because he thought it was a trivial congress of mediocre people that did not deserve his presence. The irony of this congress is that even if the politician scorned the plant scientists, the scientists fulfilled in a strict and conscientious fashion the political indoctrination of the youth. This is a situation in which there are politicians that are totally uninterested in science, and

scientists that are too interested in pleasing their politician masters who scorn them. (If you want to listen to the wife of the governor of Chiapas singing, please watch the following video: "RBD - Enséñame (En Directo)" (2005).)

In the botanical congress, I talked to Professor Jerzy Rzędowski in person for the last time. I sat close to him to listen to a talk about the phylogeny of the genus *Disocactus*. I asked him to please autograph for me a book that he wrote that is titled: "Los Principales Colectores de Plantas Activos en México Entre 1700 y 1930" (2009). Professor Rzędowski gave a talk titled "Algunas Reflexiones en Torno al Trabajo Florístico en México." In that talk, he showed a graph that showed how each year, the number of newly discovered species that belonged to the genus *Bursera* were increasing. This trend did not seem to be stopping. This showed that there were still plenty of new species that were still unknown to humankind. He said that the same happened with other taxonomic groups. Rzędowski was massively applauded in the botanical congress. No other researcher was so popular and loved by the people.

His life was epic because he was a survivor of the Auschwitz Nazi Concentration Camp. Even after suffering from such trauma, he worked strenuously in Mexico to achieve great things. He was one of the founders of Mexican plant sciences and a professor of all the generations of botanists that were alive in 2013. His thesis that was supervised by Federico Bonet Marco was titled "La Vegetación del Pedregal de San Ángel" (1954). This thesis was very important because he was the first person who did a catalogue of the species of plants of the solidified lava field known as Pedregal de San Ángel. This habitat surrounds the sciences campus and the institutes of the place where most Mexican botanists attend university. The most charismatic plants of the Pedregal de San Ángel are *Tigridia pavonia*, *Agave scabra*, *Agave salmiana*, *Carrilloa gibbiflora*, *Bursera fagaroides*, *Bursera cuneata*, *Schinus molle*, *Opuntia tomentosa*, *Wigandia urens*, *Buddleja cordata*, *Pittocaulon praecox*, and *Dahlia coccinea*.

Rzędowski's greatest achievement was making the map of Mexican ecosystems. He did this in his book "La Vegetación de México" (1978). As a taxonomist, he was an expert in the family Burseraceae. He described plenty of different species of this clade that were previously unknown to science. He also led the project to record and redescribe the flora of most of the Basin of Mexico, except the Llanos de Apan. He also famously led the project to record the flora of El Bajío.

At the end of 2013, I commissioned a candelabrum that looked like the Tree of Life of the Garden of Eden that is described in the "Torah" in "Genesis." These artistic

depictions are common in Jewish candelabra used to celebrate Hanukkah. Hanukkah is the anniversary when Judas Maccabeus recovered the second Temple of Jerusalem from the Seleucid army after defeating them in battle. The Catholics from Izúcar de Matamoros, Puebla, Mexico started to make candelabra that looked like the Tree of Life that included depictions of the temptation of Adam and Eve (Zoe). In Abrahamic mythology, Adam and Eve were the first humans that existed. In "Genesis," God YHWH (Allah) did not allow Adam and Eve to eat the fruits from the Tree of the Knowledge of Good and Evil. The snake successfully tempted them to eat these fruits, so the Deity punished the three of them. In Metepec, State of Mexico, it is a tradition to make candelabra that look like the Tree of Life, embellished with all sorts of inflorescences and animals.

I designed the candelabrum that I commissioned, and I decided that it would have the animals that are mentioned in the "Torah," specifically the ones from the lists of animals in "Exodus" and "Deuteronomy." I placed my Tree of Life candelabrum at the entrance of Quinta Santa Hildegarda. The candelabrum was made by Teobaldo Hernández and his son Hilario Hernández. These Metepec sculptors were so good that they made a Tree of Life candelabrum that was granted as a gift to Pope Benedict XVI. This sculpture is one of the treasures of the Vatican Museums. The president of Mexico, Enrique Peña Nieto, also commissioned a Tree of Life candelabrum from them. He was the president that was reigning over Mexico in 2013. The Tree of Life candelabrum that the president commissioned did not depict a biblical story. It depicted the life of the president! On top of the Tree of Life commissioned by President Peña Nieto, instead of the image of God YHWH, there was a sculpture that depicted President Peña Nieto himself! He was obviously a bit egotistical!

On Saturday the 21st of December 2013, President Enrique Peña Nieto privatized the Mexican petroleum that formerly belonged to the government of Mexico. As a result of this, most citizens were furious because the president and his pals at the congress sold something to foreign entrepreneurs that, in theory, did not just belong to them, but to all Mexicans. The Mexican petroleum was sold to foreign companies, so everything became more expensive. Citizens thus became poorer.

In early 2014, I went to Polynesia. I visited Easter Island and New Zealand. In Easter Island, I visited archeological sites that have gigantic statues of mysterious people. In New Zealand, I went to North Island, South Island, and Stewart Island. I was planting trees in a wetland in Waituna Lagoon, and at a beach that was not far from a colony of Westland petrels (*Procellaria westlandica*). The flora and

fauna of New Zealand are very strange. I saw amazing mammals such as the New Zealand sea lion (*Phocarctos hookeri*), the southern elephant seal (*Mirounga leonina*), the sperm whale (*Physeter macrocephalus*), and the Hector's dolphin (*Cephalorhynchus hectori*). There is no other place in the world with birds as magnificent as in New Zealand. For example, I saw kiwis (*Apteryx* spp.), the blue duck (*Hymenolaimus malacorhynchos*), the weka (*Gallirallus australis*), the South Island takahe (*Porphyrio hochstetteri*), the yellow-eyed penguin (*Megadyptes antipodes*), the New Zealand storm-petrel (*Fregetta maoriana*), the kea (*Nestor notabilis*), and the North Island kokako (*Callaeas wilsoni*).

This is the description of my visit to Easter Island. I went by plane from Mexico City to Santiago de Chile. The flight was during nighttime. When I woke up, I saw Mount Aconcagua, and the airplane soon landed. That afternoon, I took another plane from Santiago de Chile to Hanga Roa. In the airport while waiting in a queue to board the airplane, I saw a Chilean woman who was wearing a denim jacket with all its buttons undone. Thanks to that, she was showing off her bare tummy and her innie navel. As she had an attractive body, I decided to talk to her as an excuse to ogle at the beauty of her body. When she boarded the airplane, she removed her jacket and placed it in the overhead bin together with her bag. Her crop top not only fully displayed her bare belly and her belly button—her crop top was sleeveless, so she was displaying the skin of her arms as well. The woman looked hot!

Every time that the woman stood up to go to the toilet, and then returned to her seat, when she walked to the left of my seat, I caressed her navel so she would turn her face to me. Then I would ask her anything. It was just an excuse to finger her belly button. Fortunately, she went many times to the toilet! I befriended her very quickly because she was friendly and allowed me to grope her body. At some point, she even caressed my erect penis with her buttocks while we were in the aisle and all passengers were still sat in their seats. She told me that Easter Island was colonized by Polynesian people from the Marquesas Islands. In modern times, Chile became the owner of the island. The sexy woman told me that the gigantic statues, the moais, were built in ancient times, and that at some point people stopped building them. In the airport, my sultry friend called a taxi with her mobile telephone so I could go to the hotel where I would spend the night. There were neither taxis at the airport nor buses because it was very late. Moreover, as it was very late, all the airport staff had already left. Therefore, if I had not befriended the hottie, it would have been impossible for me to reach the hotel, as it was already too late...

Easter Island is warm and humid. Grasslands cover most of the island. These

grasslands are mostly inhabited by the following species of plants: *Cyperus polystachyos*, *Cyperus brevifolius*, *Sporobolus africanus*, *Melinis minutiflora*, *Axonopus paschalis*, and *Paspalum scrobiculatum*. The next day, I went to the archeological museum. There, I knew that *Paschalococos* forests covered the island in the past, but that the ancient Polynesians destroyed them until there were not any remaining forests. In the museum, I learned about the history of Hotu Matua, a king from the Marquesas islands. He colonized the island together with his subjects. After his death, his son became the next king. The gigantic moais were built during several generations until there was a civil war and kingship stopped being inherited from parents to children. Later, the king was chosen in a contest. Candidates ought to reach the summit of a rock in Motu Nui Island to get the egg of one of the birds that nested there (*Onychoprion fuscatus*). The first one who got the egg became the king during a certain period. In the museum, I saw the rongorongo, the written alphabet of the ancient natives. It was only used on Easter Island. My favorite exhibits in the archeological museum were a fish (*Thalassoma lutescens*) made of wood that is covered with rongorongo and a rock painting of a great frigatebird (*Fregata minor*).

Later that day, I went by boat to Motu Nui Island. That place is inhabited by pelagic birds. It rained and I ended up totally soaked! When the boat departed Hanga Roa, it was sunny and there were few clouds in the sky. Hence, I did not imagine it would rain that day. The Pacific islands have the weirdest weather that one might imagine! The sky might be totally sunny, and ten minutes later, there might be heavy rain.

During the nighttime, I went to the Tapati Rapa Nui festival. The folk dances of Easter Island are very similar to the Hawaiian ones. Both are in fact Polynesian. The folk costumes are similar. I went to an archeological site known as Ahu Tongariki. There are 15 gargantuan sculptures there. They are the so-called moais. All the statues depict people that are looking at the sea. Modern people think that they are statues that depict important people from past times. On a beach known as Anakena, there are also moai sculptures. The eyes of one of the statues are made of obsidian and of white coral (*Porites lobata*), so they look as if they are real eyes! I also went to the crater of a volcano known as Rano Raraku. It was a holy place for ancient Polynesians. This crater is surrounded by moais and inside of it, there is a lake that is inhabited by native plants. On one of the slopes of the volcano, there is a place where people used to make moai statues from the rocks that were found there. There, I saw a very strange wild bird, the red-tailed tropicbird (*Phaethon rubricauda*).

The next day, I went to the toilet, and I felt as if I had diarrhea. I was utterly shocked when I looked at my feces and I noticed that the shit that I defecated was not diarrhea! It was an oily substance that had an orange color! The color of this substance was the same as the color of the epicarp of a mandarin orange (*Citrus reticulata*). I thought I suffered from a gastrointestinal infection, but I was extremely scared by it because my feces looked totally different from any other shit that I had ever defecated! The orangey color made me feel afraid that it was a very grave disease. As I had originally planned, I flew by plane from Hanga Roa to Santiago de Chile. As soon as I reached the city, I asked the receptionist of the hotel where I could see a physician. She told me I should go to a hospital known as Clínica Alemana de Santiago. I went there. When I was there, I found out that I was not suffering from an infectious disease. What had happened was that I ate a fish that cannot be digested by human enzymes in a restaurant that was in Easter Island. They sold it to me as if it were a Patagonian toothfish (*Dissostichus eleginoides*). Nevertheless, it did not belong to that species. It was either an escolar (*Lepidocybium flavobrunneum*) or an oilfish (*Ruvettus pretiosus*).

The name of the symptom that I suffered from was keriorrhea. It was clearly not diarrhea. The orange substance was the wax ester from the tissues of the fish that I ate. I was fine the next day. The physician at the hospital knew this symptom quite well. He said that non-edible fishes are cheaper than the edible species, so it is not unusual for people on Easter Island to sell non-edible fishes as if they were edible. The physician said that I could safely go to New Zealand. I was not suffering from an illness.

It is likely that my most exciting experience while being in New Zealand was when I was in Tiritiri Matangi. Thus, I would like to describe what I experienced there: One afternoon, after returning from the Waitomo Glowworm Caves, I went to a shopping mall in Downtown Auckland to purchase a sleeping bag. The next day, I would travel by boat to Tiritiri Matangi Island! I would spend the night there hoping to see a wild tuatara (*Sphenodon punctatus*) or a wild kiwi (*Apteryx owenii*).

When we arrived at Tiritiri Matangi, a ranger welcomed all the visitors. Our luggage was moved in a van to the hostel. The tourists reached it by walking. While walking down the trail, we saw a very interesting coastal broadleaved forest full of quite weird plants and trees. It was the native flora of New Zealand. The emergent layer of the forest was inhabited by bizarre birds that sang strange songs. In the hostel, the ranger told us that we would spend the night in shared dormitories. She told me that I would sleep in the same dormitory as an Italian woman named Maria. Maria was not exactly a tourist. She was a volunteer.

The ranger said that if we wanted to explore the forest during nighttime to look for tuataras or kiwis, we should write down our names on a board. We would erase them as soon as we returned to the hostel. This was a safety procedure to ensure we made our way back safely. It was morning time. I left the hostel, and I saw a South Island takahe (*Porphyrio hochstetteri*), a very weird flightless bird that is very big and very colorful.

In New Zealand, several species of birds lost the ability to fly because there were no predatorial mammals. After having seen this bird, I went to visit some bird feeders that were visited by birds. In that place, there were several Japanese tourists taking photos of them. These birds were unique because they were endemic species of New Zealand. Amongst them were the stitchbird (*Notiomystes cincta*) and the North Island saddleback (*Philesturnus rufusater*). When I went back to the hostel, I knew that most people were interested in looking for a strange bird known as the North Island kokako (*Callaeas wilsoni*). Nonetheless, I was more interested in looking at the brown teals (*Anas chlorotis*), because I love ducks! I loved them since the Mexican duck (*Anas diazi*) became my favorite animal when I was a child. I walked during all the afternoon looking for the teals, but I did not find them.

After I returned to the hostel, Maria, my dormmate, told me that I hiked a large distance. However, I did not care. I was ready to hike even more to look for the ducks! I finally found the teals during my second hiking trip. That afternoon, I was talking to a wildlife painter that would spend the night in the hostel. Her name was Susan. She was particularly fond of painting birds and landscapes with birds. She was from New Zealand. She told me that if I wanted to go during nighttime to look for a kiwi, I would need a flashlight. She gave me her flashlight and then covered it with a red translucent plastic. She said that a flashlight producing red light would be the best to look for kiwis.

Finally, it was nighttime. The night was dark. The coastal broadleaved forest looked creepy and scary. At that time, like Madame Klockars in Uppsala, I was afraid of ghosts because I was in a highly sinister place. Nevertheless, my desire to find a tuatara or a kiwi was greater than my fear! I hiked down the dark forest with my red-light flashlight. The gloomy forest was full of non-human animal noises. Then, suddenly, a shadow flew over me and perched on a tree (*Coprosma macrocarpa*). That shadow was a morepork (*Ninox novaeseelandiae*), a species of owl! I walked more and I was excited because I heard steps on the forest floor. When I was searching for this marvel, another tourist approached me. I told him that there was a nearby kiwi. He told me that he did not believe me. He approached and he said that those steps were indeed a

bird's steps. Unfortunately, as this man was speaking very loudly, the forest animal was afraid and ran away into the darkness. I kept hiking, now fortunately alone.

I listened again to sounds on the forest floor. This time, I was there alone and very quiet. Suddenly, running very swiftly out of the forest, a little spotted kiwi crossed the trail! It was wonderful! I kept walking. After this, I heard another sound on the forest floor. When I shifted my flashlight to that direction, I saw a tuatara! The tuatara is a very ancient-looking, non-avian reptile. It is the last survivor of a very ancient lineage from extremely old times! They are long lived, and they look like a small version of a mythological dragon! I returned very happy to the hostel. I was ecstatic!

I planned to wake up early to be able to listen to the morning chorus of the birds, but I was so tired of hiking so much that I did not wake up early. What woke me up was that Maria, the woman who was sleeping in the same dormitory as me, woke up. Maria slept only wearing a bra and her panties. Unlike in most hostels, in the Tiritiri Matangi dormitories, there were no curtains around each bed, so all dormmates were able to see each other when we were in our beds. Even after she woke up, while we were chatting, she was only wearing her bra and panties because she was applying sunscreen to the skin of all her body. Maria had a very attractive body. Her waist was slim and her hips thicker. Therefore, she looked voluptuously erotic. Her navel was sexy and sultry. Her legs were shapely, smooth, and gorgeous. Her hair was long and wavy.

After having breakfast, that morning, I walked again to the pond where the ducks were living. I went there with Maria. Formerly, Maria was working on a kangaroo farm in Australia. After that, she worked as a volunteer in conservation projects in Tiritiri Matangi. Nonetheless, she had never seen a wild tuatara or a wild kiwi. I can remember that Maria's conversation was boring. However, as she had a stunning body, I did not care. I was paying more attention to her hot body than to what she was saying. We walked until reaching a wetland full of harakeke (*Phromium tenax*), a native plant species. The Māori used to make kilts and skirts with the leaves of this plant. They were the famous kilts and skirts worn by ancient Polynesians.

When I returned to the hostel, I met a Finnish tourist named Martina. It was her last day in New Zealand, so she wanted to see a North Island kokako (*Callaeas wilsoni*). That is why she traveled to Tiritiri Matangi. She was basically making a list of the New Zealand birds that she saw. That was the same as I was doing. I went with her to look for North Island kokakos. We were lucky to see a couple of kokakos, a male and a female, so we were very happy!

We went by ship to Auckland. While we were on the ferry, Martina told me that she spent three weeks hiking and camping on Stewart Island. She said it was a marvelous place. She also said that I should go there. Martina was also a gorgeous young woman. She had natural light blonde hair, a hair color that is only common in Finland and in the part of Russia that is adjacent to Finland. Her eyes were blue and her legs (which she was displaying because she was wearing very short shorts) were sexually attractive. I said goodbye to her when we reached Auckland. Meeting Martina was important for me because she had already traveled New Zealand while birding alone. She gave me a lot of tips on how and where to look for the birds that I wanted to see.

After this, I went to the hotel by taxi. I still needed to travel a lot throughout New Zealand; I would be traveling there during the following six weeks.

Several weeks later, I went to Twizel, South Island. I went to look for a bird that is a stilt known as *Himantopus novaezelandiae*. I was able to see them! When I was in the hotel in Twizel, a mystical experience that I did not summon came to me. I was praying to God YHWH. I asked Him to give me what is good and that He would deliver me from whatever is bad. Then I had a vision. I saw a transparent girl. It was possible to see what was behind her, but she did not have internal organs or bones, so she did not look like the fishes *Kryptopterus vitreolus* or *Parambassis ranga* that have a transparent integument, and their entrails can be seen through their skin. This girl was beautiful and had lovely facial features, but she was made of something that looked like a luminous gas that allowed me to see what was behind her inside the hotel room.

She did not walk—she levitated. She approached me and kissed my forehead. The effect of this angelic kiss was that I immediately felt as if I were floating. It was the same as what happens when one relaxes inside a swimming pool and our body floats on the surface of the water as if we were laying on top of the water. The same thing happened to me, but I was not floating in the water. I felt I was floating in the air. During that moment, I felt an immense and indescribable inner peace. It was as if I was united with the Universe. The mystical experience was brief but beatific. I understood this mystical experience was a sign that my prayer was right. It is always good to pray to God to get what is good, because we can always be mistaken about what is good for ourselves.

After my holidays in New Zealand, I ended up having 1796 different species of birds in my life list according to the "Clements Checklist of the Birds of the World 6.8" (2013). My lifer number 1796 was the Eastern rosella (*Platycercus eximius*) from Auckland, North Island, New Zealand.

On Sunday the 26th of January 2014, an ominous augury happened in Vatican City. Pope Francis delivered a speech where he requested that there would be peace in Ukraine. After this, he performed a ritual that involved having two children on each side of him. These kids freed two pigeons (*Columba livia*) that were symbols of world peace. These pigeons were brutally attacked by a gull (*Larus michahellis*) and a crow (*Corvus cornix*). The result of this unlucky ornithomancy was that world peace was destroyed. Three weeks later, violent political events happened in Eastern Europe that damaged the world economy in the coming decades.

Now I shall state what happened. During the Middle Ages, Kyiv was the capital city of Rus'. Rus' became more powerful and increased its territory by far beyond Kyiv. At some point, people started to call Rus' with a new name, Russia. It was essentially the same nation-state that simply changed its name. During the time of the Union of Soviet Socialist Republics, Russia was already the largest nation-state in the world. The Marxist dictators that ruled this superpower decided to split the region where Kyiv was found into a different republic within their mighty empire. That region was Ukraine. After the downfall of Soviet socialism, Ukraine became an independent country from Russia, even though it was the oldest part of medieval Rus' and the starting point from which the Russian tsardom grew.

As a result of this, at the beginning of the 21st century, some Ukrainian people felt that they were Russians and wanted to have more links with Russia than with the European Union. When Ukrainian president Yanukovych wanted to sign a free trade agreement with the European Union, Ukrainians that sympathized with Russia started countrywide protests that led to the overthrowing of the government of President Yanukovych. Vladimir Putin, the president of Russia, was a former agent of the Komitet Gosudárstvennoy Bezopásnosti (KGB) during the time of the Union of Soviet Socialist Republics, so he wanted to recreate the gigantic Russian empire of old. Hence, he supported the people that were living in the East of Ukraine so they would proclaim themselves as citizens of independent republics. To protect his allies from the Ukrainian government, Putin sent the Russian army to invade Ukraine and occupy Crimea.

My memories from the time when Birgitta the First emotionally harmed me were the memories of a time that was not as good as it could have been due to how I was mistreated by her. In 2014, I thought that Birgitta the Second would be someone similar. I imagined she would be a frightening, violent, and destructive woman. I imagined I would suffer from sadness, anxiety, insomnia, and depression due to

her. She would be a woman that would harm me with her words as if her tongue were a dagger. She would arrive stealthily, as thieves arrive to steal at midnight. She would be nightmarish, eerie, and unnerving.

But I would not be subjugated by her. That is why I performed my daily philosophical study. That is why I studied as much as possible. I was ready to fight against her. I would struggle as much as I could. I would not be subjugated.

In the next chapter of this book, I will write about how I was tested sometime later by the temptation of temptations. It is the story of my battle against Birgitta the Second...

Jurisprudence

She is Birgitta the Second; may her evilness not destroy me.

She is the princess of the wraiths; may her evilness not destroy me.

She is the princess of the vampires; may her evilness not destroy me.

She is the one who wants to guide me to the place where the dead dwell; may her evilness not destroy me.

She is the Hallowe'en pumpkin (*Cucurbita pepo*); may her evilness not destroy me.

She is the warrior who will declare war on me; may her evilness not destroy me.

She is the demon-possessed cave of Atlihuetzia; may her evilness not destroy me.

She is the mal aire that makes people ill in the Atzitzimititlán graveyard; may her evilness not destroy me.

She is the mad one that kills people behind Escuela Activa Ermilo Abreu Gómez; may her evilness not destroy me.

She is the owl (*Bubo virginianus*) that foretold the death of my great-great-grandmother; may her evilness not destroy me.

She is the mummy of Guanajuato; may her evilness not destroy me.

She is the lady of all the demons; may her evilness not destroy me.

She is the nightmare at midnight; may her evilness not destroy me.

She is the spirit of the jimsonweed (*Datura stramonium*); may her evilness not destroy me.

She is the quartz (SiO_2) crystal that was worshipped by the diabolical cult of the high school that I attended in Mexico; may her evilness not destroy me.

She is the racist intolerance of all humans; may her evilness not destroy me.

She is the autumnal influenza; may her evilness not destroy me.

She is the bacterium that infects my skin; may her evilness not destroy me.

She is the Edinburgh violinist; may her evilness not destroy me.

She tore apart God Bacchus and King Osiris; may her evilness not destroy me.

She is La Llorona and the tlahuelpuchi that haunted the house of my maternal grandparents; may her evilness not destroy me.

She is the bogeywoman that Magdalena invented to scare me; may her evilness not destroy me.

She is Esperanza the Second and Georgina Reyes the Second; may her evilness not destroy me.

She is Madame Klahr the Second; may her evilness not destroy me.

She is Adriana the Second; may her evilness not destroy me.

She is an unclean spirit; may her evilness not destroy me.

She is a sinner; may her evilness not destroy me.

Part Four

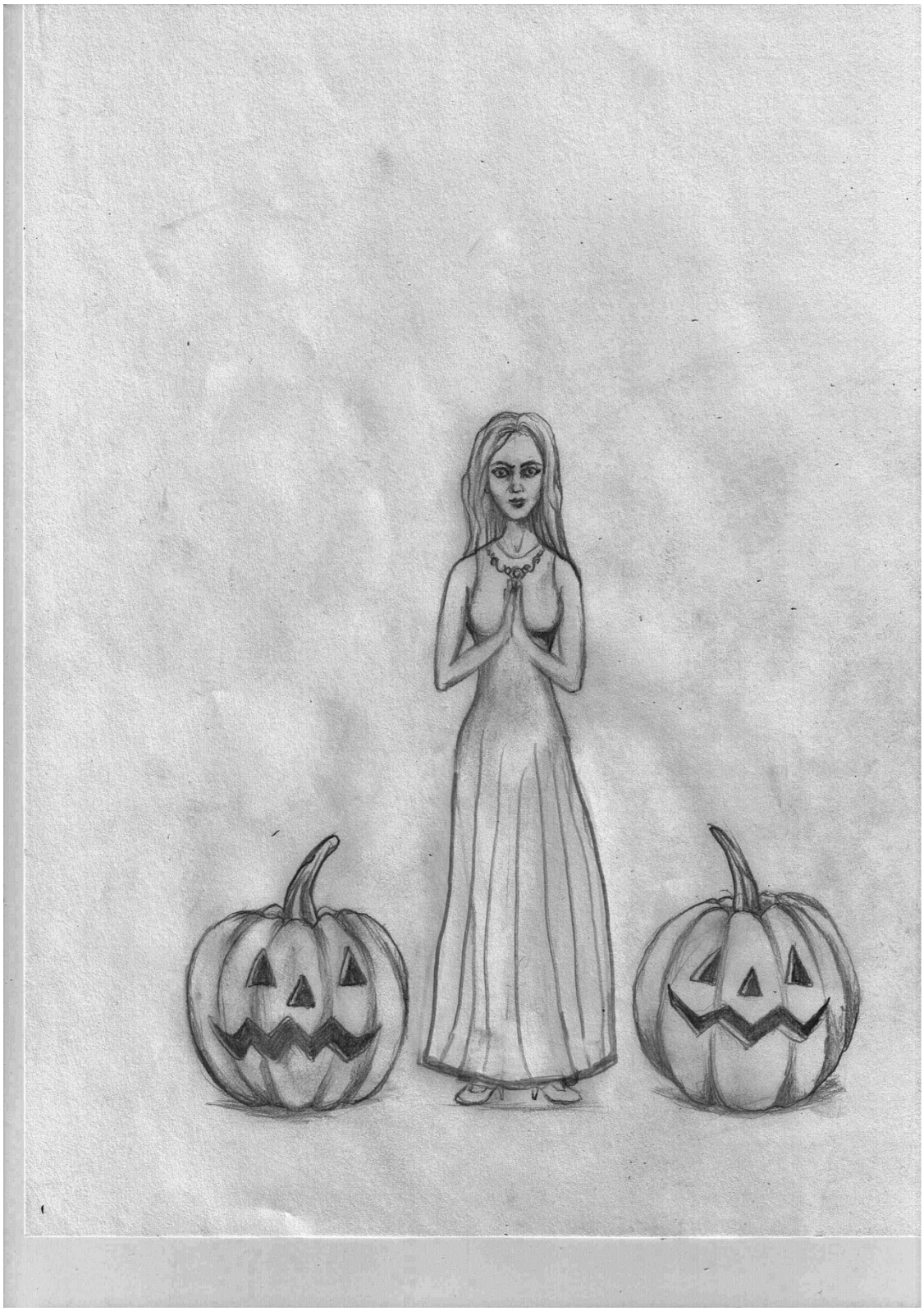
Final Boss: The Princess of the Wraiths

"I LOVE MERMAIDS!! MY FAVORITE CREATURE IS THE MERMAID!!! THAT'S CUZ I LOVE THE SEA. WHAT'S YOUR FAVORITE CREATURE?"

—The second Birgitta, the princess of the wraiths

***Dugong dugon* (Müller, 1776) (Sirenia: Dugongidae)**

Illustration made by Javier Montesinos Medrano. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 864.**



Portrait of the second Birgitta, the princess of the wraiths

Illustration made by Erick Olvera Lemus (Taner). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 864.**

***Cucurbita pepo* Linnaeus, 1753 (Cucurbitales: Cucurbitaceae)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 864.**

CHAPTER 28. FIGHTING THE PRINCESS OF THE WRAITHS

Jurisprudence

The reason why I wrote this book was to have my own personal sacred book that would include my story, the teachings of Emilio the Sage, and the teachings of Jana the Refulgent. Sacred books teach rituals. The aim of this chapter is to instruct the reader how to carry out sacred rituals. Therefore, it is one of the most important chapters of this book. The previous chapters served as training for the reader. They allowed the reader to experience all the initiation rites that are needed for this chapter. Moreover, in this chapter you will meet Birgitta the Second, the main antagonist of this story, and the difficult test that meant fighting her.

This book

When I used to chat online with Mariana using ICQ, I decided to explain to her the teachings that were taught to me by Emilio the Sage. At that time, the oral law of Emilio the Sage was substituted with a written law where his ideas were analyzed. Analyzing a law and finding the ways to apply it is known as jurisprudence. Mariana's online chat was my first work of jurisprudence. During that time, the legal source was the orality of Emilio the Sage. Such orality was also the foremost and ultimate legal authority. One and a half years later, I met Jana the Refulgent, whose orality is equally relevant. During her rule, her words were also the legal source and the foremost and ultimate legal authority.

When I performed the 24 Uppsala dialectical reflections, I developed a jurisprudence of the sayings of Jana the Refulgent. All my comments on her legal sayings were not written down, but they involved attempting to apply her laws to my daily life in a systematic fashion. This book that you are now reading is an account that for the first time includes the teachings of both teachers in a written form. It is also an attempt to perform a written jurisprudential interpretation of their laws. Hence, this book has legal validity to be applied in everyday life. It must be used to modify behaviors. The sources of the legal validity of this text are the oral sayings of Emilio the Sage and Jana the Refulgent. Such sayings combined are the supreme law. Jurisprudence works such as this book are less important than such orality, but in practice, this book is more relevant, as even though its laws are based on the supreme oral law, those words were said by Emilio the Sage and by Jana the Refulgent in the past. Thus, such words are inaccessible. As long as this text can be read, its laws hereby

***Lagenaria siceraria* (Molina, 1782) (Cucurbitales: Cucurbitaceae)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 864.**

contained can be accessed. These laws are valid for me (the author of this book), but if another were to follow them, that person is free to do so.

The pilgrimage ritual

A pilgrim is someone who travels to look for an encounter with divinity. A pilgrimage is a search for meaning in a chaotic life. During the Middle Ages, pilgrims walked long distances with a wide brim hat, a bag, a staff, and an empty dried fruit that belonged to the species *Lagenaria siceraria*. Such dried fruit was used to store water (H_2O) while they were walking. A few pilgrimages are still like that. However, most are very different. They are in every sense modern. Nowadays, people travel using high technology. Furthermore, if the pilgrim has enough money, no extreme physical effort is needed. Also, the pilgrimage can be performed in a luxurious way. Nevertheless, there is something that never changes. The search for spirituality is the same one...

During my third pilgrimage, I traveled through different places in the Mediterranean Basin, the Mediterranean islands, and the Middle East. When I was in Aegae, the former capital of ancient Macedonia, I was staying not far from the graveyard of the ancient kings. At that time, I was getting ready to fly from Thessalonica to Istanbul to start my journey through the Middle East. To prepare for my travel, I wrote an email (electronic mail) to Asia the Mystic asking for an oracle for my journey. Asia was my classmate when we studied for our bachelor's degree in biology. She claimed that she was able to obtain messages from God YHWH (Allah) that the Holy Spirit delivered to her. That is why I asked for the oracle. This is what she replied:

"Hi Peregrinus, I think it is even more important for you to 'travel' within yourself (in the Spirit) and develop a deeper relationship with your Creator than merely the physical part of the pilgrimage that you will cover with your body. I would seek the answers by myself to daily questions. That is something that I encourage you strongly to do.

Regarding the gift of prophecy, I believe it's available to every born-again Christian as the Scripture says that God will pour His Spirit on all flesh and Paul says he wished that all prophesize. I think that if you are willing, you can ask for it and practice it often. Together with love and humility it can be of great use to you and your fellow brothers/people in everyday life (which I believe also goes hand in hand with a relationship with God).

As per pilgrimage, I believe it'll be good for you but focus on the unseen (the spiritual part) more than the seen one.

Yours sincerely,

Asia."

As the pilgrimage must be an inner quest within us, it must not happen only during a holiday, when one is a religious tourist. It must be a perpetual search...

The story of the Princess of the Wraiths

Now I shall tell the story about the battle for which I waited for several years. This is the story of my battle against a scary being, the second Birgitta, the princess of the wraiths...

As you may remember from the previous chapters of this book, a long time ago, I met a young woman whose Catholic baptismal name is Birgitta. At the beginning, this woman was very nice and a good person. Suddenly, she changed, and she started to mistreat me. Finally, Magdalena, my lover at that time, helped me to free myself from Birgitta. I think that at that time, I had developed a codependence with Birgitta, a bad acquaintance that never was my true friend. Birgitta made me an insecure young man. Magdalena used to tell me that I would meet a second Birgitta. According to her, I should spend all my free time with her so I would never have to meet Birgitta the Second. Magdalena said that she would protect me from her.

To repair the bad effects of the psychological abuse carried out by Birgitta the First on me, and to avoid the arrival of the so-called "Birgitta the Second," I decided to follow the path that was shown to me by Emilio the Sage and Jana the Refulgent, my teachers of old. (At that time, the teachings of Emilio the Sage were not that far in the past, and Jana the Refulgent was still my teacher.) Emilio the Sage and Jana the Refulgent taught me philosophy, so I decided to follow the philosophical path to eliminate the harm caused by Birgitta the First and to avoid the arrival of Birgitta the Second. After all, philosophy had already been useful for me throughout my life. To do this, I established my daily philosophical study.

As years passed, I forgot sinister Birgitta the First and all her atrocities, but what about Birgitta the Second? Although the daily philosophical study was very useful, allowing me to enjoy numerous advantages in my daily life, I had not yet faced the greatest test: the temptation of "Birgitta the Second."

No university degree was like my daily philosophical study that I performed to protect myself from Birgitta the Second. My daily philosophical study included all the subjects that are included in the undergraduate degrees in continental

philosophy, analytic philosophy, and psychology. In addition to this, I studied all the rhetorical and communication methods used to influence human behavior. "On the Incarnation of the Word of God" is a book written by Coptic Pope St. Athanasius I of Alexandria. In a modern introduction to this ancient book, C. S. Lewis (1944) tells us that we always ought to read a modern book followed by an ancient book. This is to avoid restricting our worldview to the limits imposed by our modern culture.

Therefore, in my daily philosophical study, I alternated the ancient classics of philosophy and spirituality with modern university textbooks. I emphasized the study of Western magic before the Renaissance to follow in that way the path that was shown to me by Emilio the Sage. My daily philosophical study lasts an hour on average. I studied with the same methods that were taught to me by Jana the Refulgent. These methods were originally meant to study for exams at my school and university. This time, I was of course getting ready for an extremely different exam. I was getting ready to fight Birgitta the Second...

In October 2012, during my Second Pilgrimage, I was traveling by train in Europe. On the train, I met a beautiful young woman. She was golden haired and blue eyed. Her name was Ida. Her outfit was sexy and alluring because she was showing off her bare belly and belly button. I was so fascinated by her beauty that I talked to her. She told me that she was Swedish and that she was studying psychology at university. We started to talk about mind control using non-obvious methods, such as the tricks used to brainwash people or for marketing purposes. Similar methods are also used by abusers to subdue their victims with whom they are involved in dysfunctional or codependent relationships. I asked her whether it was useful in any way to learn about psychology to avoid being controlled or subdued by such methods. She told me that it is not, and that it is useless to know about them. According to her, they were so effective that even if we were aware of them, we could still become victims of abuse. This revelation was something truly frightening, because I was engaged in my daily philosophical study to avoid being seduced and abused by Birgitta the Second. If Ida was right, the daily philosophical study was useless. I never met Ida again, but her prediction always weighed heavily on my mind.

Eventually, while I was studying a textbook about personality psychology as part of my daily philosophical study, I learned about a mental illness known as narcissistic personality disorder. At that time, I did not care. However, that was an extremely important topic, as when I was able to diagnose a Mexican woman with this mental illness, I could run away from her and from her evilness. I met this lady sometime after my 2014 New Zealand journey. At the

beginning, her mental illness seemed asymptomatic, so it was not evident that she suffered from a disorder. Thanks to my knowledge, I only allowed her to misbehave for two weeks after she started to display the stereotypical symptoms of her illness. I refer to this pathological narcissist as Birgitta the Second. Nevertheless, her legal name was not "Birgitta." Her baptismal name was the same as her legal name, so it was not "Birgitta" either. Unlike Birgitta the First, the narcissist did not attempt to sexually seduce me to harm me. She used friendship as bait.

Narcissistic personality disorder happens in people that appear to be very nice and agreeable. They always want to be the center of attention. When they choose a victim, they are extremely charming with that person. When the prospective victim trusts them, devaluation starts. During this stage of the acquaintanceship, narcissists emotionally harm their victims. By doing so, these mentally ill people feel that they acquire something known as narcissistic supply. When they are bored with ruining the lives of their victims, or when they have acquired what they wanted from their victims, the victims are discarded.

Such strange behaviors are the result of lacking object constancy. This is the ability to keep feeling unconditional positive regard for a person, even if that person fails and is not as good as one expected. Hence, they idealize people a lot, and when they realize that the people that they idealized are not as good as they thought, they see them as losers. Narcissists psychologically torture the people that, according to them, are losers.

Even if I refer to the narcissist woman that I met as Birgitta the Second, she was totally different from Birgitta the First. As I wrote before, Birgitta the First behaved very differently from all her classmates. On the other hand, Birgitta the Second was an average Mexican woman in the way she looked and how she behaved. The only feature shared by both Birgitta the First and the narcissist was that both modified their bodies. They obviously did not like their natural looks. The narcissist paid a cosmetic surgeon to cut open her breasts so he could perform the famous breast augmentation. This is done by placing implants within the breasts. In the case of the narcissist, her implants were made of silicone (poly(dimethyl siloxane)). The narcissist also had unnatural-looking teeth that were by far paler than normal human teeth. These teeth were also flat and square shaped. She paid a dentist to destroy part of the natural enamel of her teeth using hydrochloric acid (HCl) and phosphoric acid (H_3PO_4). Then the dentist pasted porcelain veneers over her real teeth, making the color peculiar. This is an interesting similarity between the two Birgittas because none of my other close female friends or acquaintances modified their bodies to please society, although the

kind of surgeries performed on the Birgittas were very different because Birgitta the First was only interested in modifying her face.

In the beginning, the narcissist claimed that she admired me a lot. As she was a spiritual person, we talked about religion. She also prayed for me out loud and I would listen to her. That is how I ended up trusting her. She was who blessed me and who prayed for me before my Third Pilgrimage.

When she started to emotionally abuse me, she was helped by one of her friends named Lizbeth. Lizbeth unconditionally supported Birgitta the Second in all her misdeeds. Just a week before the narcissist started to devaluate me, Lizbeth warned me about what they were going to do. She told me: "It's going to hurt, but it's necessary..."

When Lizbeth was not with us, the narcissist triangulated me with her. Triangulation is a narcissistic technique used to abuse victims. The narcissist claimed that everything bad she thought about me was in fact what Lizbeth told her about me. In that way, she was able to humiliate me but also say that it was not her who thought that, but Lizbeth. She said that Lizbeth thought that I was a fantasy-prone person. According to her, Lizbeth said that I was as fantasy prone as a little kid, and thus, that I was too immature. The narcissist mocked me by ridiculing me in her jokes.

Moreover, she bullied me by mimicking everything I said or did with the sort of behavior as if I were a foolish man-child. During the time I trusted the narcissist, she knew how I had nightmares about ghosts and monsters when I was six years old due to Madame Klahr, my first-grade schoolteacher. During the devaluation stage of our acquaintanceship, the narcissist used that information to emotionally hurt me. Frequently, she performed with me a New Age spiritual exercise known as creative visualization, but instead of making me imagine nice stuff, she made me imagine Chthonic scary spirits. One night, before going to sleep, the narcissist reminded me of Madame Klahr using creative visualization. She also reminded me of all the nightmares about wraiths that I had when Madame Klahr was my schoolteacher. She also reminded me of all the bad experiences that I suffered during first grade. The narcissist told me that the ghosts that scared me in my nightmares when I was six years old were not imaginary. She added that they were not produced by my mind because of my fears that I had due to Madame Klahr scaring me. The narcissist said that they were real supernatural persons who wanted to hurt me and that such wraiths still existed who wanted to steal my "energy."

Some days before, to be able to successfully scare me, the narcissist cast a spell on me. That spell involved an incantation that she sang to me. She also gave me the incantation written on a paper, so I would read it out loud before going to bed and as soon as I

would wake up every morning. She also sent the incantation as a text message to my cell telephone. I never read it out loud, but it was still successful. The magic spell included 13 declarations. That is because the number 13 is considered to have great magical powers, as it was said by Toño Barrera, my classmate during elementary school.

I did not believe what the narcissist said regarding ghosts. Nonetheless, she was able to scare me even if I was not aware. I was afraid because I started to suffer from night terrors. A night terror is a parasomnia. The night terrors involved me waking up in the middle of the night while having tachycardia and being extremely terrified, thinking about the narcissist. Night terrors are somewhat usual in children, but not in adults. I was already a fully grown man at the time when night terrors happened to me! The narcissist was able to disrupt my sanity.

After I went no-contact with the narcissist, I stopped suffering from night terrors. This shows that she was the one who was the source of them. What I disliked the most about her was that she did not respect my human dignity, attempting to change me according to her own beliefs no matter what I thought. According to her, she wanted me to stop being fantasy prone, so I would stop being so immature. She always claimed that Lizbeth said that to her, so I would not blame her for that. The narcissist wanted to change the way I was because Jana the Refulgent transformed me into a different person. The narcissist claimed that she would be like a new Jana in my life. What the narcissist ignored was that when Jana the Refulgent changed me, she did not do that by force or by bullying me so I would undergo personal transformation...

The plan of the narcissist that involved substituting Jana the Refulgent was like the plan of diabolical Adriana when she wanted to replace Emilio the Sage with an unworthy impostor nicknamed El Barril. As part of the narcissist's plan to substitute Jana the Refulgent, she wanted me to reject all the teachings of my spiritual mentors. The narcissist tempted me to stop following my spiritual path so I would follow everything that she would order me to do. She promised me that following her orders would be the only way she would be nice to me again...

Now I shall transcribe the messages that I sent by telephone to the narcissist on the last day that I contacted her before going no-contact. I consider these messages to be a self-love manifesto. The timestamps above the messages were the times when I sent them. Such messages were sent on the 12th of March. Since then, that 12th of March is known as the day I fought the Princess of the Wraiths. Before that day, I feared for a long time the coming of Birgitta the Second, the Princess of the Wraiths. Fortunately, when she did arrive, I was ready to face her. I am only transcribing the messages that I

wrote, not her replies. Behold the testimony of how I fought against her in written form:

"9:50

I indeed got your message where you requested me to go to meet you today at 12:00. However, I do not want to go. I am already going with my parents to visit an archeological site in Tulancingo, Hidalgo. That is because I asked them to go on a day trip with them, so I would not give in to temptation, and hence go to visit you. I should not go to meet you anymore. No one is going to emotionally hurt me anymore. I will not develop a dysfunctional acquaintanceship with you. I will not become your victim.

9:54

I had already told you that Lizbeth emotionally hurt me. Yet, you still did the same as her. That is mistreatment because you already knew that it was painful for me. I do not want to start a dysfunctional acquaintanceship with persons that would make me suffer, and at the same time thanking such persons for their mistreatment.

9:56

This works for Lizbeth because all the people that she mistreats are people with low self-esteem. She can disrespect them, and they thank her for that. However, I respect myself. I will not look for feeling pain.

9:59

Our friendship is not okay anymore. Everything was all right until you introduced me to Lizbeth...

10:02

After I met Lizbeth, she decided the dynamics of our friendship. She decided, because of the suffering that she caused me, how you should behave with me. What Lizbeth wants from me is NOT what I want. I am sorry, we are very different persons. We have different ideas.

10:04

Since I met Lizbeth, you have not done anything else but please her by behaving according to how she wants you to behave with me. She wants me to change and that I would become a different type of person. However, the stuff that she likes does not include my priorities or my interests.

10:08

Lizbeth says that I am very fantasy prone. She says that that is not normal in an adult person. Does she want to change my personality? I am sorry to say this, but as you know, Spiritual Master Emilio saved my life by using fantasy. Lizbeth is opposing the teachings of Spiritual Master Emilio and by

doing so, you two are becoming obstacles to my personal development.

10:10

One needs to run away from obstacles. We should not tolerate that other people want to change us. We must accept people as they are, and if we do not like them as they are, the best thing to do is to stop spending time with such people. There are too many people in this world, there are always people that are just as we want them to be. There is no need to change the ones that are not as we want them to be.

10:14

I will always be myself. It does not matter if Lizbeth wants to convince you that I must change. I will NOT change because I value myself and love myself as I am. The Peregrinus that Lizbeth met is the one that I am. No one is going to change me. I will always protect my individuality. The teachings of Spiritual Master Emilio & Jana protect my individuality.

10:17

As Sage Ben Sira said in antiquity: "Do not be ashamed to be yourself."

10:18

Long live fantasy. Death to motherfucking Lizbeth.

10:20

I am getting angry. I must not do that. As Plato says, the best virtue of a man is his temperance.

10:25

The best things that I have learned from the time that I have been spending with you are the following lessons: The only possession of humans is fantasy. Therefore, fantasy is our most valuable treasure. I also learned that one has a right to individuality and that we should not try to change people.

10:27

Indeed, all such people that are narcissistic and manipulative always try to change us. But they should settle for harming the numerous people with no self-esteem that allow other people to manipulate them and emotionally torture them. I am not one of them. I value myself."

NOTES

10:17. "As Sage Ben Sira said in antiquity: 'Do not be ashamed to be yourself'." This quote comes from the "Book of Sirach" 4:20. Ben Sira was a Torah scholar from the time of the Second Temple of Jerusalem. It is possible to consider him a rabbi, as even before Hillel and Shammai were rabbis, there was a long lineage of Torah scholars that connected them to Prophet Moses, the first rabbi.

10:20 “As Plato says, the best virtue of a man is his temperance.” Temperance is in fact one of the four cardinal virtues. They are discussed in Book IV of the Platonic dialogue titled “The Republic.” The story of Plato is told in Chapter 9.

At first sight, it seems as if my defense against the narcissist was an identical situation to what I experienced with unclean Adriana. Nevertheless, Adriana was someone who I hated because I knew that she was a member of the diabolical mafia of the administrators of the school that I attended between 1996 and 2002. On the other hand, the narcissist was someone that I valued a lot, making it far easier for the narcissist to manipulate me against my wishes. Thus, she was a greater challenge.

As I was a friend of the narcissist, she could influence me more easily. But after our showdown, I went no-contact with her. I fled from her and from all her unrighteousness.

Ritual to commemorate my victory over the second Birgitta

Every 12th of March, the 14 last messages that I sent to the narcissist must be read out loud. Before reading them, a cup of chocolate must be on my right and a cup of wine on my left. Before reading them, I must state the following words: “In the name of Mariana’s online chat, where the teachings of Emilio the Sage are kept, and in the name of the 24 Uppsala dialectical reflections, where the teachings of Jana the Refulgent are kept, I am going to commemorate the defeat of Birgitta the Second.” After this prayer, I must drink from the cup of chocolate. Then, without drinking the wine, it must be libated toward Mariana’s lava tubes. They are found in a sculpture park known as Paseo de las Esculturas, Mexico City. I must say out loud: “This libation is to honor Emilio the Sage.” Then I need to read the messages out loud. After reading the messages, I must drink from the cup of chocolate. Then without drinking the wine, it must be libated toward Mariana’s tubes. I must say out loud: “This libation is to honor Jana the Refulgent.”

Chocolate is a beverage made with the cocoa from the seeds of *Theobroma cacao*. It is also made from milk that comes from cows (*Bos taurus* or *Bos indicus*). Wine is a grape (*Vitis vinifera*) beverage that is fermented by *Saccharomyces cerevisiae*. During this ritual, I must wear the Samsung 7-15x35N binoculars that Emilio the Sage blessed. If it is the 12th of March and I am in a city where I do not live, any other binoculars are fine. If there are no available binoculars, that is okay. In case the 12th of March happens during a flight across the Pacific Ocean that would cross the International Date Line, the Chatham Islands Rule applies. That was the

rule under which I practiced my daily philosophical study on Thursday the 14th of July 2011.

This is the Chatham Islands Rule: In case the whole calendar date only lasts a few hours, the daily philosophical study is practiced at that time. If the International Date Line is crossed during the middle of the daily philosophical study, it does not matter. The daily philosophical study continues until the whole hour of study is fulfilled. The jurisprudential interpretation of this rule to practice the 14 messages ritual is that immediately after finishing the daily philosophical study, in such cases, I must practice the ritual. In such cases or in any other case involving a flight, no toast or libation is required. Reading the 14 messages is enough. In such aeronautical conditions, no binoculars are needed.

Mariana's lava tube system is a series of solidified lava tubes found beneath the Pedregal de San Ángel lava field. They are found within a sculpture park known as Paseo de las Esculturas. They are located to the east of the concert hall known as Sala Nezahualcóyotl; to the north of the drama college building known as Centro Universitario de Teatro; and to the south of the sculptures. Apparently, soon after Mount Xitle erupted, one of the main tubes collapsed. So, it is now an open-air collapse pit with underground lava tubes at each side of it. The underground solidified lava pond where I shared a mystical experience in 2002 was connected to the collapse pit. It was located to the northwest of it. The underground lava pond has collapsed, and it is now an open-air breakdown (19.3145466837407, -99.18338822227905).

The ritual for the daily philosophical study

Every time there is a change in topic in my daily philosophical study, or in my study of sciences & mathematics, I ought to read the doctrinal chapters of this book. They should be read in the following order: Appendix D, 14. *Triticum aestivum*, 15. *Haemophilus influenzae*, 16. *Vitis vinifera*, 17. *Androctonus australis*, 18. *Nicotiana tabacum*, 19. *Lophophora williamsii*, 20. *Homo neanderthalensis*, 21. *Amicia zygomeris*, and 22. *Thysania agrippina*. Appendix D is the route of Mariana. The route of Mariana should not be read as the other chapters. It must be read by staring at the coordinates of the route of Mariana that are found in Appendix D. You should try to avoid interpreting the symbols as numbers. Yes, they are indeed numbers, but you should stare at them as if you were illiterate or as if they were signs of a language that is unknown to you. Try to look at them as if they were mere drawings, just images with no meaning.

Before starting to do this, you must breathe deeply and slowly and attempt to stop thinking about anything. Once you achieve

this state of inner peace, you need to see the numbers slowly and one by one. You should not think about anything else but the written numbers. You need to stare at them as if they were a painting in an art gallery and not as if they were numbers. These coordinates are a work of art, but the artwork is not the written text itself, but the way you will perceive it. You do not need to keep seeing the numbers at the same speed. There is no right way to look at them. You can see them from right to left, from left to right, or even upside down. If, after looking at this, you do not notice anything special, you should not forget that this ritual is symbolic. It is not a meditation or any other kind of spiritual exercise. Thus, you should not look for results whatsoever. The procedure entails engaging in an activity that does not have any purpose—that, by itself, is the result. Sometimes it is good to do something without expecting anything to happen because of it. Most animals have adapted to act in a certain way so they can get something due to their stereotypical behaviors. Humans are the same. But humans are also rational, so it is possible for us to free ourselves from that for a moment and to do some stuff without the need to look for an aim or result while doing that.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

Appendices

“=xanath=: I want my house to be full of garbage, with rock music playing at full volume, and with vultures and snakes eating my parents.”

—Mariana, the cousin of Héctor Jaramillo, in the ICQ online chat

***Gyps indicus* (Scopoli, 1786) (Accipitriformes Accipitridae)**

Illustration made by Jonatas Ferreira. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 865.**

Portrait of Mariana, the cousin of Héctor Jaramillo

Illustration made by Helga Nagy (Lèda Havasi). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 865.**

***Papaver somniferum* Linnaeus, 1753 (Ranunculales: Papaveraceae)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 865.**

ESSAY

Appendix A: THE 13 CHILDREN OF THE SINNER

3rd century AD

Once upon a time, when the Roman Empire ruled the Mediterranean Basin, there was a young Christian maiden named St. Justina in what is now Turkey. She practiced sexual abstinence as part of her religious lifestyle. A young man named Aglaidas wanted to marry her, but she rejected him because of her Christian vow of chastity. Aglaidas went to see a sorcerer that was a summoner of angels so he would perform rituals that would allow him to marry St. Justina. The angels that attended the sorcerer were followers of the Devil. The sorcerer's rituals were useless. When the sorcerer noticed that the power that kept the virginity of St. Justina was greater than the power of the angels that assisted him, he became a Christian. That sorcerer is known as St. Cyprian of Antioch...

20th century AD

My grandfather Néstor was a farmer. He obtained his crop production from his own land. He was a member of a political council that informed the government about the needs of the farmers of Vista Hermosa de Negrete, the town where he was born. During World War II, he worked as a legal immigrant farmer in Oregon, United States of America. When he lived in Tlalnepantla, he worked as a security guard for private companies. My grandfather Néstor and other men from Vista Hermosa de Negrete practiced magical rituals that they read in a grimoire known as "Libro de San Cipriano, tesoro del hechicero." This book was not written by St. Cyprian of Antioch, but the author claimed to be him so readers would believe in everything he wrote. My grandfather Néstor became a devout believer in the power of St. Cyprian of Antioch. That was because of the title of the grimoire that was used by him and his friends to perform rituals.

One day, Néstor was working in his agricultural fields. He was doing something that is known as bush burning. This entails getting rid of wild plants by burning them before planting economically important crop plants. Suddenly the fire was out of control. The wildfire was unstoppable, and it was already burning the agricultural fields of other farmers. Néstor threw a holy card onto the fire. The prayer card had a depiction of St. Cyprian of Antioch. Then something strange happened—a strong wind produced a fire whirl that displaced the fire toward the air. Unexpectedly, there was no more fire. My grandfather Néstor claimed that it was a miracle performed by St. Cyprian of Antioch.

Another time, he was with Madame Araiza, his wife. They were at the ranch of one of their friends. It was almost midnight. In that ranch, there were alfalfa (*Medicago sativa*), pigs (*Sus domesticus*), and chickens (*Gallus gallus*). Then, 15 men with weapons arrived. They were ready to kill Néstor. They wanted to kill him because he had sex with a married woman. My grandparents quickly grabbed their rifles. When

***Medicago sativa* Linnaeus, 1753 (Fabales: Fabaceae)**

Illustration made by Irina Korobeichuk. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 865.**

the armed mob was about to approach, my grandfather touched an icon of St. Cyprian of Antioch and said: "This is my last prayer to you, please save me!" Immediately, the icon shined with a divine light and the armed mob ran away. It seemed they were highly scared, but no one was running after them. That was another miracle of St. Cyprian of Antioch. In Catholic stories that are officially sanctioned by the Church, every time God YHWH (Allah), Jesus, the Virgin St. Mary, or a saint help a sinner through a miraculous intervention, the sinner repents and stops sinning. But my grandfather never repented. According to him, "Any man who does not have sex with plenty of women, even married women, is not a true man." Folk Catholicism, unlike ecclesiastical Catholicism, does not teach Platonic or Stoic morality...

In agrarian societies, it is useful to have plenty of children, as the more children, the more farmers working when they grow up. Therefore, the family of Ernesto Alvarado, my father, was extremely numerous. This is the list of Néstor's children and of what they did:
Néstor's first child was Margarita Alvarado. She was a housewife. She suffered from an illness whose main symptom was that after sunset she started to squirm her body. Her muscles were briefly paralyzed during nighttime, resulting in her arms and legs being twisted in an anomalous position. During the daytime, she was asymptomatic. The physicians from Zamora, Guadalajara, and Mexico City were not able to heal this illness. As she was a member of an African Mexican family, she was both a Catholic and a follower of an African diaspora religion. A priest from an African diaspora religion that lived in Vista Hermosa de Negrete told her that she was an energumen that was possessed by a demon or a dybbuk. The difference between a demon and a dybbuk is that the demon is not a human person whereas the dybbuk is a human ghost that was once alive. "Demon" and "dybbuk" are the Abrahamic words employed to refer to these beings; I do not know the names applied to them in African diaspora religions.

Another African diaspora priest that was living in Mexico City and who was a friend of Néstor exorcized the unclean spirit that was possessing my aunt. The African diaspora priest said that this demon or dybbuk was sent by Margarita's mother-in-law named Aurora. She sent the unclean spirit using African diaspora necromancy. Aurora hated Margarita because Aurora claimed that Margarita was ugly. According to Aurora, her son deserved a prettier wife, as according to Aurora, he was very handsome. The legend of St. Cyprian of Antioch teaches us that the mighty power of God YHWH must be preferred by any Catholic above seeking the help of a heathen sorcerer. However, apparently Néstor believed that the tale of St. Cyprian of Antioch instructs Catholics to imitate Aglaidas by looking for pagan witch doctors to solve any family issues. Aglaidas was not able to marry St. Justina, but Margarita was indeed healed from the demonic possession... When Margarita was old, she suffered from hypertension. She stopped taking the pills that her physician prescribed for her high blood pressure problem because she felt okay. As a result of this fatal mistake, she died from a myocardial infraction.

Néstor's second child was Severo Alvarado, who was named after his paternal grandfather to

honor him. When Severo was a child, my grandmother Madame Araiza was cheating on my grandfather Néstor by having a sexual love affair with another man. Severo told Néstor what he had witnessed. My grandmother Madame Araiza punished Severo by tying a rope as if she would kill a criminal by hanging. She placed the noose on Severo's neck and then pulled the rope so he would slightly feel the strangling feeling of being hanged. After that, she threatened him by saying that she would kill him by hanging him if he kept talking about her extramarital love affairs to her husband.

My uncle Severo worked as a farmer while he lived in Vista Hermosa de Negrete. Afterward, he worked as an undocumented illegal immigrant farmer in California and Arizona, United States of America. Later, he worked as a cleaner mopping the floors of a Mexico City supermarket. That supermarket was an Aurrerá store. During his old age, he suffered from hypertension, and he then died of a myocardial infraction because his wife advised him to stop taking his blood pressure pills, but he was alive thanks to those pills. According to his wife, he could stop taking them because he was already cured of hypertension.

Néstor's third child is Francisco Alvarado. He worked as a farmer in Vista Hermosa de Negrete. He also worked as an undocumented illegal immigrant laborer in a factory in Texas, United States of America. Later, he worked as a chef in Matamoros, Tamaulipas. Afterward, he worked in the dining room of one of the factories of the corporation named Nacional de Cobre (Nacobre). He is a scoundrel and a liar. He swindled my father. He asked him to work together in a business. They planned to sell milk. The deal was that my father would buy some cows (*Bos taurus*) and pay for their maintenance. Then, Francisco would take care of them at his farm in San Marcos Jilotzingo, Hueypoxtla, State of Mexico. The money that would be obtained by selling milk would be divided between both brothers. My father bought the cows as was agreed.

Francisco kept them at his farm with my father's money and obtained a lot of milk from them. Francisco never gave any money to my father. He kept all the profits from selling milk. Years later, Francisco sold a land lot to my father so he could build a house there. It was in Santiago Cuautlalpan, Tepotzotlán, State of Mexico. Nevertheless, that plot of land did not belong to Francisco. He did not have any property deed for the land. Hence, he got money from selling something that did not even belong to him. My father built a house there. As a result of that, my parents had a lot of legal troubles, as my father was essentially building a house on land that did not belong to him.

Néstor's fourth child was María Alvarado. She arrived in Tlalnepantla during her youth. At that time, Tlalnepantla was full of criminal gangs. Every time she went out to the streets, she was escorted by one of her brothers to prevent her being sexually abused by a gangsta. Her brother always carried an iron rod such as the ones used to build constructions. It was an improvised weapon to protect her. She worked as a seamstress in a clothing factory that was owned by Italians.
Afterward, she became a traditional African diaspora religious healer. That was thanks to the

fact that her family had sub-Saharan African cultural inheritance. Her son introduced my father to Nora, who became his illicit lover while he was legally married to Marisol, my mother. María Alvarado died because of a kidney failure. It was the outcome of being ill from diabetes. If you want to know what type 2 diabetes mellitus is, please read Chapter 4.

Néstor's fifth child was Teresa Alvarado. She died because of an illness when she was still an infant. This happened before my father was born. At that time, in the region of Mexico known as El Bajío, all dead children were known as "little angels." People believed that when children died, they were transformed into holy angels of God YHWH. This belief does not have a biblical basis. In the "Bible," angels such as Archangel Gabriel or the destroying angels are not like humans. They do not belong to the same species of creature. In the canonical gospels, Jesus says that when people will arrive at Paradise, they are not going to be married, in the same way that the holy angels are not married. Nonetheless, he never says that dead humans will become angels. He only claims that humans will be like angels with respect to marriage. However, the ancient Greek pagan prophet Hesiod claims in "Works and Days" that the people who lived in the Golden Age were so righteous that after dying, they became angels. The El Bajío belief in the children that become little angels after dying shows us the syncretism that existed in Catholicism between Christianity and the currently extinct Graeco-Roman Olympian religion.

Néstor's sixth child is Ramón Alvarado. He was a farmer while he lived in Vista Hermosa de Negrete. Afterward, he worked as a deliveryman. He delivered meat to the butcher shops of Mexico City. Later, he worked as a factory laborer. He was an operator of an oven in Nacobre. One day, during the time when he was a farmer, he was working in the countryside. Suddenly, an American barn owl (*Tyto furcata*) that was screeching flew in front of him. He thought the barn owl was a witch and since that day, he claimed that he witnessed the apparition of a witch. Since antiquity, owls have been associated in folklore and religion with nocturnal women that have supernatural powers. Examples of this include Lilith in ancient Israel or the Graeco-Roman striges.

Néstor's seventh child was José Alvarado. He worked as a farmer in Vista Hermosa de Negrete. He loved singing. Once, a radio station from La Barca organized a singing contest of regional Mexican songs. People from all surrounding towns, villages, and ranches participated in the contest. José went there and he beat all the other contestants. He won first place. This achievement inspired him to become a professional singer of regional Mexican music. He was never genuinely famous. He was simply a mariachi. His favorite songs were the ballads sung by Javier Solís (e.g., "Si Dios me quita la vida" (1965)). He was also a boxer. That allowed him to obtain more money. Finally, he worked as a forklift operator in Nacobre. He became an alcoholic, and he died from cirrhosis because of it.

Néstor's eighth child was Jesús Alvarado. He worked as a farmer in Vista Hermosa de Negrete. Afterward he worked in a government-owned company named Compañía

Rehidratadora de Leche CONASUPO. Now it is known as Liconsa. Later, he worked breeding roosters (*Gallus gallus*) for cockfighting. He practiced soccer/football as a sport. At the end of matches, it was common that the arrogance of the winners and the indignation of the losers led to altercations that degenerated into brawls where all members of both teams punched and kicked each other. Therefore, Jesús Alvarado became an expert in street fighting because of being involved in such clashes. He suffered from diabetes. One of his legs was amputated due to the complications of his illness. Madame Araiza, his mother, also had a leg amputated because of diabetes. Jesús Alvarado died of diabetes. He was a bad influence on my father. That is how my father learned that soccer/football is enjoyable and an excuse to perform violence... As such, when I was a child and my father was watching a soccer/football match on television, he totally ignored me when I attempted to talk to him.

Néstor's ninth child is Teresa Alvarado, who was named after her sister who died years before she was born. The second Teresa Alvarado worked in the same clothing factory as her sister, María Alvarado. Afterward, she worked in a factory that made brooches and safety pins. In this place, she was able to become a shift manager. When she was a teenager, she bought a bottle of Coca-Cola. She placed it on a table in her house. After this, she left. Her brother, who later became my father, wanted to drink Coca-Cola. Hence, he drank from the bottle until it was half full. He then attempted to fool Teresa the Second by filling the bottle with water (H_2O) and coffee (*Coffea arabica*). He thought Teresa the Second would not notice this because the mixture has the same color as Coca-Cola. When Teresa the Second drank from the bottle, she realized that the beverage did not taste like Coca-Cola. She complained about this to Madame Araiza, her mother. She told her that my father had drunk part of the Coca-Cola and had filled the bottle with water and coffee. As a result of this, Madame Araiza physically abused my father. Since then, Teresa the Second and my father stopped talking to each other for a whole year. This was a negative formative experience for my father; that is how he learned to mistreat my mother using the silent treatment every time she did something he disapproved of.

Néstor's tenth child is my father, Ernesto Alvarado. He helped farm crop plants only when he was a kid. That was before he was destined to become a minister of the Catholic Church. As he was too young when he helped his brothers with their farmland, he was not yet able to plant. Therefore, he helped his brothers throughout the day by scaring the pest birds that attacked the cropland (*Agelaius phoeniceus*, *Molothrus aeneus*, *Molothrus ater*, & *Quiscalus mexicanus*). My father had a donkey (*Equus asinus*) named El Canelo. He used his donkey to transport firewood to his home. Catholic priests claimed that to ensure that a whole family would attain salvation and would not go to Purgatory or Hell after dying, the family should offer a child to the Church, so the young person would become a member of the clergy.

As my father was the tenth child, he was handed as a tithe to the Church. That is because the tithe is the 10% of the total agricultural products or monetary income of a Catholic handed to the Church. If a family had ten children, one of

them would be the tithe offered to the Church. The Jesuits educated my father in their elementary school to become an eloquent priest. All my father's friends ended up studying to become Catholic priests. The former plantation known as Hacienda del Molino had an old chapel. It is the Capilla de Nuestra Señora del Refugio. In that place, there was a sculpture of Jesus, the founder of Christianity. The sculpture's right hand was raised. The Jesuits told my father that when the sculpture would lower its hand, it would be the end of the world. Every time my father entered the church, he approached the sculpture of Jesus, as he was full of fear and religious fervor, to check whether the hand was lower than the previous day or not. The sculpture never lowered its hand... My father lived in Vista Hermosa de Negrete until he was 13 years old, the same number of years as the number of Néstor's children. If you want to keep reading about my father's life, please continue reading Chapter 2.

Néstor's eleventh child is Graciela Alvarado. She earned a medical degree at university. She married a physician. While she was married, Graciela worked as a medical doctor in Nacobre. In that corporation, there was an old boss whose name was Galván. He was rich. At that time, Graciela was young and poor. Galván was married, but his wife was older than Graciela, so he cheated on his wife with my aunt, the young physician of Nacobre. That relationship was profitable for Graciela because Galván gave her plenty of money, gifts, and amusements in exchange for sex. When Galván retired, his successor hired a new medical doctor and fired Graciela. The reason was that Graciela was not a good physician. She was extremely lazy and the only reason why she was an employee of the company was because of her love affair with Galván.

Every year, my father obtained better roles and salary in Nacobre, in part because of the eloquence he acquired while being trained to become a Catholic priest. He became an important manager in the factory that was in Tultitlán, State of Mexico (19.60047623229773, -99.18146364411085). He had the privilege of meeting Patricio Slim, the son of Carlos Slim, the owner of Nacobre and all the conglomerate Grupo Carso. Hence, Graciela started to ask my father to please invite her to his reception parties and business meetings. That was because Graciela wanted to meet one of the old, rich executives that my father was acquainted with so she could become his lover. As my father did not invite her, she verbally abused him to force him to do what she wanted. My father was furious with her and never fulfilled her desires.

Néstor's twelfth child is Sergio Alvarado. He earned a bachelor's degree in business administration at university. He worked in the accountancy department of a private company. Afterward, he became a teacher of enrichment and remedial programs for elementary school kids. As Sergio Alvarado did not earn a lot of money in his work, he was jealous of my father, who had an important executive job in Carlos Slim's corporation. One day, my father went to visit his parents. That day, Sergio Alvarado told my father to go away from their parents' Tlalnepantla home. He added that my father should never return because it was not his house. My father was indignant at what his

younger brother said, so he replied by stating that on the one hand, he indeed gave money to his parents to pay for home maintenance even if he did not live there anymore. On the other hand, Sergio Alvarado lived in that house but never gave any money for home maintenance. Since then, Sergio Alvarado and my father hated each other and became rivals.

Néstor's thirteenth child is Silvia Alvarado. She earned a bachelor's degree in accountancy at university. However, she never worked as a professional accountant. She became a housewife after finishing her university studies. When Silvia was a kid, a woman from Vista Hermosa de Negrete named Pepita was arrested on drug trafficking charges. She was arrested because she owned a farm plot where she kept marijuana plants (*Cannabis sativa*). At that time, marijuana was an illegal drug. Silvia loved that woman and spent all the time with her. Hence, when she was arrested, Silvia mournfully cried while saying: "Don't abduct Pepita!" I do not know why but her relatives found that very funny. Since then, all Silvia's siblings nicknamed Silvia as "Pepita." Later in life, Silvia became a cocaine addict. Cocaine is a drug obtained from the leaves of the coca plant (*Erythroxylum novogranatense* or *Erythroxylum coca*).

My grandfather Néstor was always a man of many contrasts due to the moral conflicts of the time when he lived. On one side, the farmers of Vista Hermosa de Negrete, children of the former slaves of the plantation known as Hacienda del Molino, told him that "whoever is not badass is not a true man." Being "badass" involved not only a kind of personality or attitude toward life, but also being an adulterer and a thief. To avoid feeling inferior to his friends, Néstor lived a criminal life, as was expected by his society. On the other side, he knew well that the Catholic Church considered that adultery and stealing the private properties of other Catholics were sins that could potentially condemn the soul of a man to go to Purgatory or Hell. Néstor truly believed that Jesus was an emissary of God YHWH and that his syncretic religion that was a mixture of Judaism with pagan Greek ethics was indeed an outline of the kind of behavior that the Deity expected every human to follow.

Furthermore, Néstor truly believed that Purgatory and Hell existed and that the Catholic church was indeed an institution that taught the will of the Deity. Thus, he believed that his sinful life would cause his soul to be damned and sent for punishment after his biological death. That is why it was so important for him to hand the tithe of his agricultural products to the Church. Not just that, but even offer my father's life as a tithe to the Church. He hoped that would reduce or avoid the punishments he would suffer after his death. In fact, Néstor was always a mere coward that never could live according to his own convictions. If he did believe that "whomever is not badass is not a true man" then he would have lived a sinful life being ready to happily be punished by the angels of God or by the angels of the Devil after his biological death, as he lived according to what he knew was right. If he did not believe that "whomever is not badass is not a true man" then he should have lived a righteous life according to the ethics of the Platonic, Stoic, and Cynic philosophers that influenced Jesus and St. Paul the Apostle. He should have lived that life

regardless of what society would think about him, even if his pals would think he was not man enough. He should have lived that life because he knew he was following the will of the Deity. Nevertheless, he was always too cowardly to live according to any of both ideologies. Therefore, he was always a puppet that was manipulated by his friends and by the Catholic Church at the same time, as he always wanted to please everyone. If you want to keep reading about Néstor's life, please continue reading Chapter 2.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

ESSAY

Appendix B: ON ASTROLOGICAL MAGIC TO KNOW THE FUTURE OR MODIFY IT

The peoples of ancient Mesopotamia foretold the future by looking at the sky. The ancients divided the yearly route that the Sun follows through the sky as it is perceived from planet Earth in 12 constellations. As Heraclitus said, everything is constantly changing. As time went on, as empires fell and new empires became powerful, the path of the Sun changed as well. Nowadays, it does not just move through the 12 original constellations. Now it moves through a total of 13 constellations. However, many astrologers have not changed the way they attempt to foretell the future, even if the Sun does not follow the same route anymore. That is good as a religious dogma.

Nevertheless, if astrology is truly the study of the effects that the Sun, the Moon, and the planets have on Earth according to their position in the sky, then dividing the sky into the 12 ancient parts does not make any sense. That is simply because the Sun does not follow that route anymore. In antiquity, the signs of the zodiac were assigned by the constellations. To live erroneously attached to their ancient dogmas, modern astrologers decided that the signs of the zodiac are not the same as the constellations. This erroneous belief allows them to keep doing astrology as if the sky had never changed. The problem of this self-delusion is that their predictions are not based anymore on the modern sky. Therefore, if it is true that the real positions of the Sun, the Moon, and the planets have effects over human destinies, then the astrologers that do not study the sky directly by looking at it are not going to be able to foretell the future anymore. That is because they do not look at what is really happening above their heads in the sky, and they prefer to live in a fantasy world where the sky remains being the same as in antiquity.

After all, according to the ancients, the zodiac signs were not something independent of the constellations. They did not believe that the zodiac signs were a mere human fiction that was independent of the routes of the Sun, the Moon, and the planets, as many modern astrologers want to define them. In this way, a lot of modern astrology is not based on looking at the sky carefully, but on personal dogmas... If the positions of the Sun, the Moon, and the planets indeed rule the human destinies, it is better to know the constellation where they are found in the sky, instead of the zodiac signs of the astrologers' imagination. A true astrologer would not become obsessed with so many books of ephemeris or software to make astrological predictions. True astrologers would need to watch the sky directly with their eyes and measure it constantly with an astrolabe such as Claudius Ptolemy or the Muslim wizards of the "Picatrix."

All the astrological references of this book use the true positions of the planets, the Sun, and the Moon with respect to the sky constellations accepted by the International Astronomical

***Potamon mesopotamicum* Brandis et al. 1998 (Decapoda: Potamidae)**

Illustration made by adrialychnis. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 865.**

Union (IAU) as they can be observed by plain sight or with the use of a telescope in a clear sky at night. The astrology of this book is NOT based on traditional sidereal, tropical, or draconic astrology. Hence, I do not cite the zodiac signs that appear in the astrological ephemeris or in the kind of software that astrologers use to supposedly foretell the future. What I cite in this book are the constellations that people can see in the night sky. That is because I consider that the direct empirical observation of nature is more important than what is written in books or in computer programs according to humans' blind faith. I accept that there are 13 constellations through which (as it is empirically perceived from the Earth) the Sun travels over a year.

These constellations, with approved names by the IAU, are Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Ophiuchus, Sagittarius, Capricornus, Aquarius, and Pisces. The Moon and the planets also travel through these 13 constellations, but they can also travel through Cetus, Orion, Auriga, Hydra, Sextans, Crater, Corvus, Scutum, and Pegasus. If an astrologer doubts this information, that person should buy a telescope and closely watch the night sky directly. The divine nature is greater, more complex, and more portentous than all the ephemeris books that have been written. Astrology is a pseudoscientific discipline and there is no way to make controlled experiments to demonstrate its veracity or to falsify it. Thus, any subjective interpretations of the reader regarding the astronomical positions during the birthdays cited in this book are valid. If the reader considers that it is impossible to predict the future by looking at the sky, that belief is also valid. Therefore, I never attempt in this book to provide an interpretation on what such astral positions mean.

Nonetheless, I still thought it was important to tell the reader the real positions of the celestial bodies on the birthdays of the protagonists of this story because that is something that has had an eminent cultural relevance in plenty of traditions and folklore. Such positions can be used as mystic or occult symbols.

The position of the heavenly bodies when Jana the Refulgent was born on Saturday the 30th of June 1984 allows me to know that her solar constellation is Gemini, the divine twins. Her lunar constellation is Cancer, the freshwater crab (*Potamon mesopotamicum*).

The position of the astronomical objects when I was born on Sunday the 9th of December 1984 allows me to know that my solar constellation is Ophiuchus, the bearer of the serpent (*Zamenis longissimus*). My lunar constellation is Gemini.

The position of the celestial bodies when Mariana, the cousin of Héctor Jaramillo was born on Friday the 10th of May 1985 allows me to know that her solar constellation is Aries, the golden ram (*Ovis aries*). Her lunar constellation is Capricornus, the Suhur-mash-ha, the holy beast that is half fish (*Carasobarbus luteus*) and half goat (*Capra hircus*).

The position of the celestial bodies when Asia the Mystic was born on Tuesday the 24th of June 1986 allows me to know that her solar constellation is Gemini. Her lunar constellation is Capricornus.

I do not know the birthday of Enríquez, and I do not know the birthday of Emilio the Sage.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

ESSAY

Appendix C: A DESCRIPTION OF THE NATURAL HISTORY MUSEUM OF MEXICO CITY IN THE 1980S AND 1990S, INCLUDING AN OUTLINE OF ITS PREVIOUS HISTORY

PEREGRINUS HIERUSALEMSIS

Abstract

All the exhibitions of the natural history museum of Mexico City are described. The history of the museum is included. The mural painting by Diego Rivera titled "El agua, origen de la vida en la Tierra" is discussed.

ZooBank LSID: urn:lsid:zoobank.org:pub:D0175613-7A77-4DB2-913B-43BD737932D2

Citation: Hierusalemsis P (2025*)* A description of the natural history museum of Mexico City in the 1980s and 1990s, including an outline of its previous history. In: Hierusalemsis P (ed.), *The Princess of the Wraiths: an herbal, bestiary, human zoo, and memoir.* Miami: Books to Hook Publishing, LLC. pp. 676–705.

Published: Saturday the 21st of June 2025 Anno Domini

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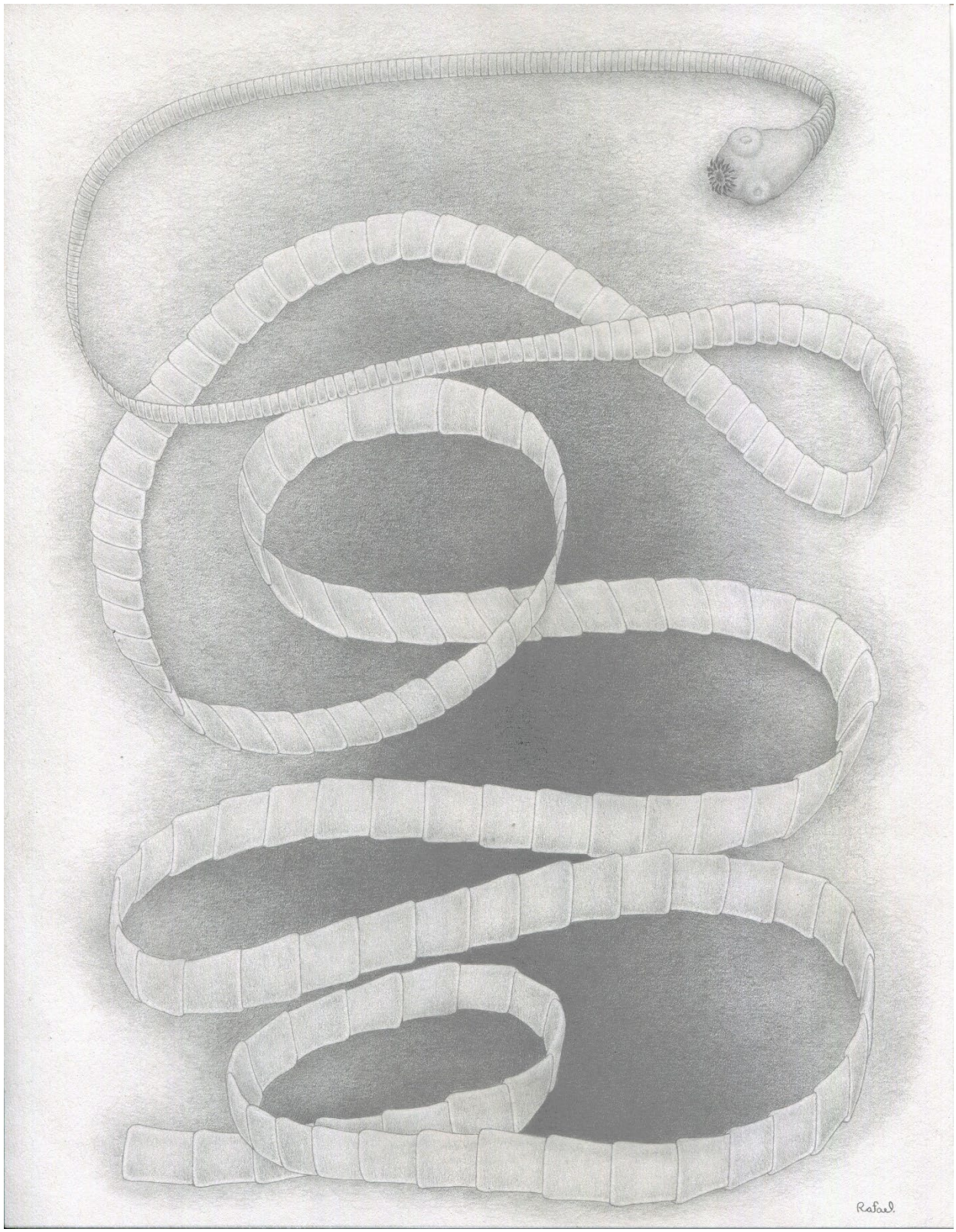
Data Availability: No datasets were generated or analyzed during the current study. All relevant data from this study is hereby being made available.

Competing interests: The author declares that no competing interests exist.

Introduction

When I was a kid, I visited for the first time a natural history museum known as Museo de Historia Natural de la Ciudad de México that is found in Segunda Sección de Chapultepec, a city park (19.409769659750324, -99.20150103993542). It immediately motivated me to learn plenty of new stuff. I was more interested in that museum than in any other museum thanks to the books that my uncle Jorge Reyes Mejía gave to me as gifts. Such books were about the same topics. As time went on, the museum was remodeled. The contents of the museum were reduced to a lesser number of sciences. The pictorial art that comprised the mural paintings on the walls and in the background of the dioramas was destroyed.



***Taenia solium* Linnaeus, 1758 (Cyclophyllidea: Taeniidae)**

Illustration made by Rafael Calderón. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 865.**

Most dioramas were removed. The quality of the explanatory text in the museum labels decreased as if it was intended that children would not gain new knowledge. The number of exhibits was reduced. This happened at the same time that the quality of education for Mexican children was diminished. This was a decision of the government, as it oversaw the educational curriculum. The reason is that the Museo de Historia Natural de la Ciudad de México was an institution whose main aim was to educate kids. It was organized in such way that it could reflect the Mexican educational system that was imposed by the government.

In the 2000s, it was fashionable to say that encyclopedism in education was wrong, as it involved the students needing to apply plenty of rote memorization. It was fashionable to say that it was more useful for the students to acquire "competencies" to perform useful tasks in life. The negative effect of the new educational model was that the educational curriculum was greatly reduced. As a result of this, students had less general knowledge and were more ignorant in their own areas of expertise than ever before. This was of course more convenient for the government. The reason is that, as Thomas Hobbes (1668) said in his book titled "Leviathan," "knowledge is power." Ignorant people criticize less the politicians in power. Furthermore, they are more easily manipulated with demagogy and marketing. Since the museum was reduced, I think that it is suitable to write down how the extremely beautiful Museo de Historia Natural de la Ciudad de México was in the decades of the 1980s and the 1990s. This is important to fulfill the aim of this book, as the museum that inspired me in my childhood was not the one that can currently be visited. It was the one that I shall now describe.

Astrophysics Hall

The museum was exceedingly dark. It did not have any electric lights on the ceiling. Only the exhibits had their own lightbulbs. That allowed visitors to pay all their attention to the exhibits. At the entrance, there was a huge dome where the stars of the night sky were displayed. Such stars were the ones that can be seen from the Earth's equator at midnight during mid-July. The stars were tiny light bulbs. In the floor, right below the dome, the constellations that could be seen in the vault were depicted with the appearances that were given to them by ancient Greek astronomers. These appearances included holy heroes, non-human animals, and tools. There was also a wall that was very large that included scale models of the Sun and the planets of the solar system, so children could notice the differences in size between the different astronomical objects and the distance found between each other.

In a showcase, there was a curious device that looked like clock movement. It was a grand orrery. This machine moved some tiny balls that depicted planets around a central ball meant to be the Sun. The planets moved at real speed around the Sun, so it took 365 days for the ball meant to be the Earth to go around the orrery. In this way, visitors who went frequently to the museum could notice how the length of a tropical year varies for different planets. In all the solar system models, Pluto was included, but not Eris, which has a similar size. That is because

Eris was not yet discovered. It was discovered in 2005. The heliocentric model of the solar system was put forward by Copernicus (1543). If you want to read his original book, please read "De Revolutionibus Orbium Coelestium." Another exhibit displayed several scale models of spaceships that were sent to explore outer space. There was also a showcase with fragments of meteorites that fell from the sky. In the museum, there was a gigantic terrestrial globe that was larger than a person. It depicted in three dimensions all the mountain ranges and sierras of the world. Moreover, it was painted with different colors to show the different types of ecosystems that are found on the surface of the Earth.

Earth Sciences Hall

After all the previously mentioned exhibits, there was a collection of minerals. There were big and stunning, naturally crystallized samples of the most popular minerals of Mexico, be it due to their abundance, due to their appearance, or due to their economic importance. There were specimens of graphite (C), native sulphur (S_8), native copper (Cu), native silver (Ag), native gold (Au), quartz (SiO_2), hematite (Fe_2O_3), magnetite ($Fe^{2+}Fe^{3+}{}_2O_4$), pyrite (FeS_2), halite (NaCl), fluorite (CaF_2), calcite ($CaCO_3$), aragonite ($CaCO_3$), galena (PbS), malachite ($Cu_2CO_3(OH)_2$), gypsum ($CaSO_4{\cdot}2H_2O$), talc ($Mg_3Si_4O_{10}(OH)_2$), topaz ($Al_2SiO_4(F,OH)_2$), cinnabar (HgS), chalcopyrite ($CuFeS_2$), rhodochrosite ($MnCO_3$), grossular ($Ca_3Al_2(SiO_4)_3$), fluorapatite ($Ca_5(PO_4)_3F$), danburite ($CaB_2(SiO_4)_2$), sphalerite ((Zn,Fe)S), pyrargyrite (Ag_3SbS_3), pyrrhotite ($Fe_{1-x}S$), smithsonite ($ZnCO_3$), goethite (α-FeO(OH)), hemimorphite ($Zn_4Si_2O_7(OH)_2{\cdot}H_2O$), anhydrite ($CaSO_4$), cassiterite ($SnO_2$), scorodite ($FeAsO_4{\cdot}2H_2O$), molybdenite ($MoS_2$), baryte ($BaSO_4$), peridot ($(Mg, Fe)_2SiO_4$), vanadinite ($Pb_5(VO_4)_3Cl$), adamite ($Zn_2AsO_4OH$), azurite ($Cu_3(CO_3)_2(OH)_2$), wulfenite ($PbMoO_4$), mimetite ($Pb_5(AsO_4)_3Cl$), bismuthinite ($Bi_2S_3$), celestine ($SrSO_4$), wollastonite ($CaSiO_3$), arsenopyrite (FeAsS), acanthite (Ag_2S), rosasite ($(Cu,Zn)_2(CO_3)(OH)_2$), &c.

There was an exhibit that was a map labeled with tiny light bulbs. These light bulbs showed the mineral deposits of the most economically important minerals of Mexico. For example, there was a button labeled "silver." When one pressed that button, all the tiny light bulbs that displayed the silver mines were turned on. The same went for all the other economically important ores. There was a diorama of a mountain cut to show the different strata that correspond to each period of the geologic timescale. The most important events that happened to life on Earth were matched to their respective stratum.

Origin of Life Hall

The museum showed a likely hypothesis about how lifeless organic molecules organized themselves to produce the first life forms. The hypothesis that was outlined in the museum was proposed by Alexander Ivanovich Oparin (1924) in his book titled "Proiskhozhdeniye Zhizni." Biochemist Oparin is barely known by average people from most countries in the world. However, he was too important in

Mexico. In the 20th century, it was considered that every educated Mexican should be acquainted with his work. That was weird because he was not even Mexican. Madame Rodón, my middle school biology teacher, claimed that Oparin was as important as Charles Darwin for biology. That is obviously an exaggeration.

I guess the reason why he was so admired by Mexicans in the 20th century was that all brainwashed students in favor of Soviet socialism idealized him because he was a Russian that cited communist agitators. Moreover, he provided an alternative hypothesis to the biblical origin of life. As they were anticlerical and worshipped Russian politics, they loved his views. Indeed, famous painter Diego Rivera, a well-known socialist, dedicated a mural painting to Oparin (more of that later). In Museo de Historia Natural de la Ciudad de México, the whole building with the larger number of halls was named the same as the title of Oparin's book: "El Origen de la Vida." The part of the museum that was named after Oparin's book included four halls. These halls were about the origin of the most ancient life forms from abiotic molecules; about the Aristotelian Scala Naturae; about ecosystems; and about the biodiversity of the eras of the geologic timescale. This was in part because Dionisio Peláez, the designer of the museum, was a soldier of the Republican army during the Spanish Civil War. He was exiled by the government of Francisco Franco due to his socialist views. Thus, he wanted to honor Oparin, who was a fellow socialist.

Now I shall describe the exhibits of Oparin's hypothesis itself. At the beginning, there was a checklist of chemical elements, except the f-block metals. They were listed according to their atomic numbers. It was weird because it was not a periodic table... Afterward, there were some ball-and-stick molecular models. The balls depicted atoms, and the sticks depicted covalent bonds. These molecular models showed the main groups of organic molecules. In the next exhibit, there was a model of coacervates in suspension that were supposed to be in primitive waters (H_2O). The coacervates were depicted by spheres. In real life, coacervates are tiny aggregates made of organic molecules. According to Oparin, some of the early organic molecules of this planet formed coacervates. He thought that volcanic eruptions and the large pressure under the primitive ocean allowed that there would have been enough activation energy for the formation of more complex macromolecules. These macromolecules would be needed to set the organization of metabolism that would give life to the coacervates. To show this, there was a diorama of an erupting volcano surrounded by molecular models. J. B. S. Haldane (1929) in his paper titled "The Origin of Life," published in "The Rationalist Annual" 148: 3–10, considered that the physical and chemical properties of the primitive ocean allowed that the Sun's ultraviolet light would provide enough activation energy for the formation of macromolecules.

Stanley Miller (1953) in his paper titled "A Production of Amino Acids Under Possible Primitive Earth Conditions," published in "Science" 117(3046): 528–529, states that when he tried to test Haldane's hypothesis of the origin of life, he was not able to use ultraviolet light because he was working with glassware.

According to him, “electrical discharge was used in his experiment to form free radicals instead of ultraviolet light, because SiO_2 absorbs wavelengths short enough to cause photo-dissociation of the gases.” Hence, the next exhibit in the museum had some thunder and lightning painted behind the three-dimensional spheres that depicted the coacervates. The museum visitors were expected to imagine that the thunderstorm was giving life to the coacervates; this is like how lightning from an electric storm was used to give life to the monster that appears in the novel “Frankenstein; or, the modern Prometheus” by Mary Shelley (1818). The next exhibit showed the earliest prokaryotic cells that, according to Oparin, were the result of the coacervates acquiring life. Following the example of the fictitious Victor Frankenstein, scientists Miller and Harold Urey gave some electric shocks to their origin of life experiment. Nevertheless, unlike the romantic antihero, they did not generate life from what was not alive... Oparin and his followers were the real-life counterparts of Frankenstein.

The next exhibit in the museum displayed some big models of viruses. In that way, the sculptor who made them provided children with an idea of how the most common virions or viral particles looked. Unlike Oparin’s fictitious tales, this was indeed something objective that truly exists. We are just not familiar with them because, due to their small sizes, viruses are invisible to human eyes. After the viruses, there was an explanation with photos of the mitosis and the meiosis of cells. Mitosis means, in eukaryotic cells, that a cell copies all its genome and then divides to produce two cells. If you want to read an account of mitosis by Walther Flemming (1882), its discoverer, please read the book “Zellsubstanz, Kern und Zelltheilung.” Meiosis is a process that occurs in eukaryotic species that have sex. In meiosis, genomic sequences within homologous chromosomes inherited from the parents of an individual are exchanged between the homologous chromosomes. Then, four haploid cells are produced by cell division. Some of these cells become gametes. A gamete is a cell that will fuse with the gamete of another organism to form a new individual. To read about the exchange of genomic sequences through recombination during meiosis, please read the paper by Thomas Hunt Morgan (1911) titled “Random Segregation Versus Coupling in Mendelian Inheritance” that was published in “Science” 34(873): 384. Even if mitosis and meiosis were included in the museum, prokaryotic binary fission was excluded from the exhibits...

Scala Naturae Hall

In the next hall, there was a Scala Naturae like the one suggested by ancient Greek philosopher Aristotle. The Scala Naturae was shown in showcases. Philosopher Plato thought that of all mammals, humans are closer to the Deities (the astronomical objects). That is why our heads are found pointing toward heaven and not toward the ground as in most other species of synapsids. This is written in the dialogue “Timaeus.” This had a profound influence on the views of his disciple, Aristotle. Aristotle was the first person who thought about a psychodynamic hypothesis.

These types of hypotheses entail that the human mind is composed of several parts that are in constant conflict with each other. In real life, the basal ganglia of the brain need to evaluate all the contradictory information sent by the cerebral cortex to select what the person will do. Psychodynamic hypotheses try to explain something like this, but in mystical metaphorical ways. The most well-known pseudoscientific psychodynamic hypothesis is Freud's psychoanalysis. Aristotle's original hypothesis states that the human soul is composed of three parts that are constantly in conflict. These parts are a vegetative soul, a sensitive soul, and an intellective soul. The vegetative soul is what allows people to uptake nutrients and grow in physical size. The sensitive soul is associated with the presence of a peripheral nervous system. The intellective soul or spirit is what provides people with the ability to think. Aristotle noted that different organisms had different types of composite souls. For him, red algae, chlorophytes, charophytes, plants, oomycetes, brown algae, slime molds, and fungi only had a vegetative soul. Most animals also had a sensitive soul, so in a way, they were superior because they had an extra soul. Finally, humans were superior to other species because they also had a third soul. In this way, Aristotle echoes the belief of his teacher about the superiority of humans over other beasts. However, Aristotle noticed that not all non-human animals are equal. Some of them seem closer to humans in morphology and in their ability to reason. Therefore, Aristotle imagined that there was a great chain of being from the lower type of organisms to the most perfect ones. This is the Scala Naturae.

In the Middle Ages, Christian priests considered that there were two extra steps in the chain of being above humans: one containing the angels, and one above them containing God YHWH (Allah). This can be read in the work of Ramón Llull (1305) titled "Liber de Ascensu et Descensu Intellectus." Having angels above people seems strange because according to the "Torah" in "Genesis," "God created mankind in His own image." However, according to Psalm 8, the psalm known as "Domine Dominus Noster," humans were made "a little lower than the angels." I guess this means angels were also made in God's image. Prophet Muhammad in the "Qur'an" tells a story regarding the sense in which angels are higher than normal people. Once God asked all the angels to prostrate before Adam. The Devil refused, as according to him angels are superior to humans because angels are made of fire, and humans are made of earth. According to ancient Greek philosopher Heraclitus, fire was divine and thus superior to all matter and the ultimate principle of all things. The Scala Naturae of the Museo de Historia Natural de la Ciudad de México did not include Deities or angels, it was just the Aristotelian one. In this set of showcases, the different groups of organisms that inhabit the Earth were shown following the scheme of the Scala Naturae of Aristotle. Aristotle did not know the microorganisms that do not form visible colonies in nature, but in the same way as the Christian scholastics modified the Scala Naturae to include God YHWH and the angels, the museum designers updated it by including the groups of microbes within the great chain of being. They assigned superiority to nucleated cells over prokaryotic cells. That is obviously

because humans have nucleated cells and, as Plato said, humans are closer to the Deities.

Maybe the museum designers were secularists, agnostics, or atheists; but to display the ancient Scala Naturae, they were required to be influenced by the theistic philosophy behind it. They also assigned superiority to multicellular organisms over single-celled organisms. That is also because humans, the divine beasts, are composed of innumerable cells arranged in specialized tissues. The order of all multicellular organisms originally ranked according to superiority by Aristotle was not modified in the museum's updated Scala Naturae. Above each showcase of the Scala Naturae, there was a wall lamp with an image that depicted a species belonging to each taxonomic group. The lamps with organisms that according to Aristotle only had a vegetative soul had a different color than the lamps showing organisms that supposedly had at least two souls.

The showcases displayed preserved specimens that once were alive. These specimens included plenty of marine invertebrates that are almost never shown in museums. There were sponges, corals, jellies, echinoderms, worms, mollusks, crustaceans, &c. There were also real-life dead specimens of endoparasites of the human gastrointestinal tract, such as *Taenia solium* and *Ascaris lumbricoides*. The animal biodiversity that lives inside the human body is horrible! On the opposite side of the hall, there were taxidermy animals that were standing over a substrate of little white pebbles. There were all sorts of creatures there! There was a leopard (*Panthera pardus*), wolves (*Canis lupus*), a sloth bear (*Melursus ursinus*), a wolverine (*Gulo gulo*), iguanas, turtles, cranes, storks, &c. After that, there was a collection of taxidermy hummingbirds from Mexico. It had an exceedingly majestic beauty. Whomever was not a birdwatcher would immediately start spending time watching wild birds after having seen this exhibit. That was because it was impossible for any visitors not to be filled with awe after having seen all that diversity of colorful avifauna. Indeed, that was the best place to learn about all the diversity of Mexican hummingbirds. It was better than reading birding guides, because the hummingbird illustrations from "A Field Guide to Mexican Birds" (1973) and from "A Guide to the Birds of Mexico and Northern Central America" (1995) were ugly.

In the following showcase, there was a collection of lepidopterans. For that display, the museum curators selected the most showy and dazzling species from Mexico. That would allow children to be fascinated by so much magnificence. After the collection of lepidopterans, there was a collection of coleopterans. As with the previous group of insects, the most eye-catching and resplendent species were selected. The beetles shined with mesmerizing metallic colors that motivated children to study science. It might seem strange that Aristotle and his Scala Naturae were so important. The two curators who designed the museum were Dionisio Peláez, a Spaniard, and Ernesto Valdez, a Mexican. Spain and Mexico have been greatly influenced by Jesuit education. That is why Aristotle was so relevant. During the Middle Ages, Muslim philosopher Al-Kindi started to mix Aristotelian philosophy with Abrahamic theology. This became fashionable all over Dar al-Islam and soon Jewish rabbis did that as well. Scholasticism also became popular in Western

Europe where St. Thomas Aquinas became its most important thinker. He modified Catholicism to combine it with the pagan ideas of Aristotle. During Christian Reformation, Luther wanted every Christian to know how to read so they could read the "Bible."

As a strategy against this form of Christian biblical education, the Catholic Jesuits also started to educate people in their own version of Christianity, the Aristotelian Thomism. The populations of Spain and Mexico were indoctrinated into this form of Neo-Scholasticism. Two of the most famous Neo-Aristotelians from New Spain were Francisco Javier Clavijero and Antonio Alzate. If you want to read the biological hypotheses of Aristotle, please read "On Soul," the "Parva Naturalia," the "History of Animals," the "Parts of Animals," the "Movement of Animals," the "Progression of Animals," and the "Generation of Animals."

Ecosystems Hall

In the next hall of the museum, there was a hugely tall mural painting. It displayed how marine biodiversity changes from the surface to the deepest regions of the ocean. It showed how fishes gradually change until becoming psychedelically bioluminescent. In that mural, the most important details were a sperm whale (*Physeter macrocephalus*) and a giant squid (*Architeuthis dux*). There was also a submersible known as the Trieste bathyscaphe. What I loved the most of that mural were the deep-sea fishes such as *Melanocetus murrayi* because they looked unlike any species familiar to me. In that museum hall, there were dioramas with taxidermy animals displaying the ecosystems of plenty of different places. The dioramas remained most of the time with their lights turned off. When the visitors turned on the switch of a diorama, they heard a brief thunderous noise and the lights were turned on, giving life to the diorama. The loud sound and the light transformed the magic into reality and allowed the visitor to travel to fantastic worlds! There was a coral reef with real coral skeletons and brightly colored fishes. There was a full-body model of an imposing fish known as *Latimeria chalumnae*. There was a diorama of Tibet that had a snow leopard (*Panthera uncia*). There was a colony of California sea lions (*Zalophus californianus*). There was a wetland inhabited by exotic geese. There was a marsh from Lake Texcoco that had plenty of water birds, including my favorite animal, the Mexican duck (*Anas diazi*)! There was a penguin (*Spheniscus humboldti*) colony. There was a seaside cliff with seabirds. There was a golden eagle (*Aquila chrysaetos*) dwelling in a landscape that was identical to a canyon close to Golfo de Santa Clara, Sonora (31.72870365022593, -114.48518308190735). There was a jungle from the Congo that included its breathtaking megafauna. There was a mangrove that was full of fishes and water birds. There was a *Pinus* forest from North America. There was a dam made by North American beavers (*Castor canadensis*).

There were three dioramas that displayed different strata of a tropical rainforest from Mexico. The first one showed the forest floor, where there were two crested guans (*Penelope*

purpurascens) that I found amazing! The second diorama showed the canopy layer of the forest, and the last diorama showed the emergent layer of the forest. There was a diorama that depicted the diurnal fauna of the desert. Another one was the same landscape, but it showed the nocturnal fauna of the very same desert! It was impressive to see how radically the ecosystem changed according to the time of the day. There was also a sampler of diverse species of African antelopes preserved as taxidermy mounts.

Mural painting on the phylogeny of all organisms

In the museum, there was a superb mural painting that depicted a phylogeny of all cellular organisms. Each taxonomic group had a representative organism that was painted with its real colors. This phylogeny showed an evolutionary thinking, as organisms were not depicted according to an artificial classification such as the Aristotelian Scala Naturae. Here, evolutionary relationships were shown. However, this phylogeny was not as how we currently understand evolution. It displayed how evolution was understood when the museum was first opened to the public. I shall now describe the phylogeny in the mural painting. After that, I will explain the current theories at the time I am writing this essay to show the reader how they differ from the old phylogeny in the mural painting. In the mural painting, the last universal common ancestor of all organisms was depicted. It was of course an imaginary prokaryote, as no one knows how it looked. From this, there was a polytony of eight clades. Apparently, the exact relationship between these evolutionary lineages was uncertain at that time. They of course were derived from the last universal common ancestor. The first clade included the brown algae, and it had a painting of a kelp (*Macrocystis pyrifera*). The second clade included the fungi, and it had a painting of mushrooms (*Mycena pura*). The third clade included amoebae and plants. The illustrated amoeba belonged to the species *Chaos carolinense*. There were several lineages of plants illustrated on the mural painting, such as a conifer (*Cupressus sempervirens*). The fourth clade included bacteria and the prokaryotic archaea, and it had a painting of *Lacticaseibacillus casei*, a bacterium. The fifth clade included the sponges, and it had a painting of *Aplysina fistularis*. The sixth clade included the cnidarians, and it had a painting of a jelly (*Chrysaora quinquecirrha*). The seventh clade included the protostome animals, and it had paintings of several species, including a lobster (*Homarus americanus*). The final clade included the deuterostome animals, and it had paintings of several species, including a bird (*Trogon mexicanus*).

I shall explain how this phylogeny differed from what we currently know. This is what we now believe: The last universal common ancestor had as offspring throughout the ages two large groups, the Bacteria and the Archaea. The oldest fossils that have ever been found, such as *Archaeoellipsoides,* belong to the Cyanobacteriota, one of the groups of bacteria. However, it is surprising that molecular studies have shown that Cyanobacteriota is not the oldest bacterial group; there are even older extant groups such as the Thermotogota and the Synergistota. There are different types of

bacteria. They include the infamous bacteria that harm humans and the good bacteria that help us, such as the good *Lacticaseibacillus casei* that was shown in the museum mural painting. The second major branch of cellular organisms is the Archaea.

Originally, only the most basal prokaryotic cells of this group were thought to belong to the clade Archaea, but now we know that all creatures that have a cell with a nucleus, the so-called eukaryotes such as humans, evolved from this group. The most basal archaea look almost like bacteria. In fact, in the past, they were known as the archaebacteria. But they are not bacteria, they are our ancient ancestors. The modern prokaryotic archaea that are closer to us belong to a clade known as Asgardarchaeota. An example of a species of archaeon belonging to this group is '*Candidatus* Lokiarchaeum ossiferum.' (To learn what the word "*Candidatus*" means in this context, please see the glossary.) The eukaryotes, the organisms with nucleated cells such as humans, are quite diverse. They can be divided into the following clades: Anaeramoebae, Parabasalia, Preaxostyla, Fornicata, Discoba, Cryptista, Archaeplastida, Hemimastigophora, Provora, Haptista, TSAR, Ancyromonadida, Malawimonadida, CRuMs, and Amorphea. The plants in the mural, such as the conifer, belong to Archaeplastida. The brown algae in the mural, such as the kelp, belong to TSAR. The amoeba, the mushrooms, and all the animals of the painting belong to Amorphea.

Indeed, we are not that different from mushrooms! In the mural painting, monocotyledon plants (monocots) were close to non-vascular plants; conifers were close to dicotyledon plants (dicots). That is not how we now understand the evolution of plants. Non-vascular plants are basal, and vascular plants are more derived. Among the vascular plants, the conifers are older than the flowering plants that include both monocots and dicots. In the animal phylogeny of the mural, there were four clades of uncertain origin. Now we know their relationship. All animals are monophyletic. That means that we all share a common ancestor. Sponges are the most basal animals that were depicted in the mural, followed by the cnidarians, such as the jelly. Later, animals split into the two main branches: The deuterostomes, such as the bird of the mural; and the protostomes, such as the lobster of the mural. Humans are of course deuterostomes.

Evolutionary theory is not easy... At least not as it seemed in the old mural! Like the name of the previously mentioned amoeba (*Chaos carolinense*), the evolution of cellular organisms might seem like "chaos" for the uninitiated! If you want to read about the metaphor of evolution as a phylogenetic tree, and about the theory of evolution, please read the book by Charles Darwin (1859) that is titled "On the Origin of Species by Means of Natural Selection, or the preservation of favoured races in the struggle for life."

In the past, medieval Muslim alchemists made elixirs with different ingredients. These were the mineral essences (lapis mineralis); the plant essences (lapis vegetabilis); and the animal essences (lapis animalis). To read a text that suggests this division, please see the "Kitab al-Ahjar" by legendary wizard Jabir ibn Hayyan. Later, European alchemists thought the lapis mineralis, the lapis vegetabilis, and the lapis

animalis were not average elixirs, but sacred reagents needed to make the philosopher's stone. You can read this in the "Rosarium Philosophorum sive Pretiosissimum Donum Dei" (1550). Medieval, Renaissance, and Enlightenment Europeans followed this classification—that is why Linnaeus said there were three kingdoms in nature: the mineral, the plant, and the animal. Of these, only plants and animals were biological kingdoms. Both were eukaryotic kingdoms. To learn about Linnaeus's (1740) view on the kingdoms of nature, please read his paper titled "Doctor Linnaei Tanckar om Grunden til Oeconomien genom Naturkunnogheten och Physiquen" that was published in "Kungl. Svenska Vetenskapsakademiens Handlingar" 1: 411–429. After that, thanks to the theory of evolution, we now know that similar organisms are related, and all cellular organisms share a universal common ancestor. Modern classifications are the result of this insight.

What Charles Darwin found most fascinating about his firsthand observations in the Galápagos Islands, Ecuador, was the diversity of mockingbirds he collected there (*Mimus parvulus*, *Mimus trifasciatus*, & *Mimus melanotis*). That was his first empirical observation that inspired him later to realize that similar species share a common ancestor, and that species are not immutable. Different islands had different species of mockingbirds, but all of them were somewhat similar. It seemed as if all of them came from a single common ancestor and being isolated in different islands allowed them to change morphologically with time. Jana the Refulgent, who taught me philosophy, once went to the Galápagos, but she did not care about the mockingbirds. What she found most appealing was the way male magnificent frigatebirds (*Fregata magnificens*) court the females.

Evolutionary biology has obviously been developed beyond Darwin. He did not know about genetics. The modern synthesis, when genes were included in evolutionary theory, was pioneered at the beginning of the 20th century by Ronald Fisher, J. B. S. Haldane, Sewall Wright, and Theodosius Dobzhansky.

(You can find out more about systematics in my classification of non-bacterial cellular organisms in Appendix I.)

Geologic Timescale Hall

In the next museum hall at the Museo de Historia Natural de la Ciudad de México, there were dioramas of the eras of the geologic timescale. These dioramas consisted of small, handcrafted artistic sculptures. Mural paintings were used in the dioramas to depict the sky or the immensity of the sea in the background. The first diorama was about the Paleozoic Era. It showed how early animals and algae evolved in the seas. This diorama included the astonishing creatures of the Cambrian explosion, such as trilobites. After this, there were later marine organisms such as nautiloids and eurypterids. Further ahead, the first fishes were found and after them, the most basal tetrapods. The next scene depicted the forests of the Carboniferous and Permian periods. These forests were rich in giant lycopods, *Calamites*, and tree ferns. The diorama was populated by basal synapsids. In front of the diorama, there was a collection of

Paleozoic fossils that included plants and invertebrates.

The next diorama was about the Mesozoic Era, which began in the Triassic Period and ended in the Cretaceous Period. This diorama was trimmed with forests and swamps that were full of non-avian dinosaurs. There were wonderful stegosaurians, ankylosaurs, ceratopsians, hadrosaurs, sauropods, and non-avian theropods. There have been very few objects in my life that I have loved more than that Mesozoic diorama! In the background of the diorama, at the end of it, there was a volcanic eruption shown. That is a reference to the Deccan Traps that were formed by volcanic eruptions at the time of the Cretaceous-Paleogen extinction event. Some people think that they contributed to the extinction of the non-avian dinosaurs. When the diorama background was made, the formation of the Chicxulub crater due to an asteroid impact was not yet accepted as a reliable hypothesis for the extinction of all the Cretaceous megafauna.

In front of the diorama, there was a collection of Mesozoic fossils such as ammonites. Above the dioramas, there was an enormous mural painting that depicted the phylogeny of the non-avian reptiles, including the dinosaurs. Each clade was magnificently illustrated with an animal species that belonged to it. In the middle of the hall was the famous skeleton model of the sauropod dinosaur *Diplodocus carnegii*. It was the favorite exhibit of all kids: A colossal white sculpture whose tail was resting on the floor. Its tail was a bit curled.

One day, when I was a child, Ernesto Alvarado (my father) picked me up and lifted me so I could touch the mouth of the skeleton model of *Diplodocus carnegii*. I remember that I touched its mandible! It was a fabulous experience! That was not allowed, but no one did anything to stop it. Nowadays, the skeleton model of *Diplodocus carnegii* does not look as it did in the past. The new museum curators decided to paint the skeleton brown. They also decided to display it with its tail up in the air, so it would stand in the same position as sauropods stood when they were alive. If you want to know more about this iconic skeleton cast, please read the book by Tom Rea (2001) that is titled "Bone Wars: the excavation and celebrity of Andrew Carnegie's dinosaur."

Behind the *Diplodocus carnegii*, there was a gorgeous diorama embellished with scrubs, woods, and savannahs that depicted the ancient life in the Cenozoic Era, now only found as fossils. In that diorama, there was megafauna. Sublime mammals of several evolutionary lineages swarmed that world that was full of exuberant plant life. One of my favorite mammals of that diorama was the giant ground sloth named *Eremotherium laurillardi*. Among such sculptures, there was also a *Diatryma gigantea*, a graceful bird. All these statuettes were small. We children were required to imagine the animals having their real, whopping sizes in our minds! That was easy because we children had an excess of imagination! In front of that diorama, there was a collection of fragments of fossils of Pleistocene megafauna that are abundantly found buried in the central Mexican highlands. Above this diorama, there was a gargantuan mural painting that depicted the phylogeny of the mammals. All the lineages were beautifully illustrated.

In the same hall, the most alluring of the museum, there was a mural of the evolution of horses. This mural was very similar to a famous illustration by Rudolph Zallinger titled "The March of Progress" that can be seen in the book by Howell (1965) titled "Early Man." The difference was that the museum mural did not display the progress of humanity, but of horses! In that place, there was also a sculpture of the humongous jaws that showed the real size of the mouth of the extinct shark *Otodus megalodon*... The museum hall about the biodiversity of the geologic timescale influenced me so much that during some years in my daily prayers to God YHWH, I asked Him to please allow me to dream during my sleep of the non-avian dinosaurs as they truly looked and lived in the past.

Evolution Hall

In the next hall, there was a showcase of the work of Gregor Mendel with peas (*Pisum sativum*). Thanks to that work, he found the laws of inheritance. He basically found that in diploid organisms, there are two copies of each gene in the genome. He found that there are different variants of a gene that we now know of as alleles. Furthermore, that some alleles are expressed dominantly, and other ones are recessive. He also found the fact that chromosomes assort independently, even if he never saw a chromosome, but he saw the effects of independent assortment in the plants he studied. This is very important because before this, no one knew how inheritance worked. When I was a kid, I loved how the pretty pea flowers were displayed in the museum and how mysterious inheritance "forces" controlled their appearance. If you want to read the original work by Mendel (1866), please read his paper titled "Versuche über Pflanzen-Hybriden" that was published in "Verhandlungen des Naturforschenden Vereines in Brünn" 4: 3–47. Afterward, there was one of the most spectacular showcases in the museum. It showed fetuses of different species. Two hypotheses were shown here. One was Karl von Baer's idea that at the beginning, all fetuses regardless of their species follow a similar pathway and that suddenly they change to end up looking as they will be as adult vertebrates.

The other hypothesis was Ernst Haeckel's recapitulation hypothesis. It states that ontogeny recapitulates phylogeny. To show both hypotheses, the fetuses of different species of vertebrates were displayed in different rows and columns. Each column showed a different species. Each row showed a morphologically similar stage in the ontogeny of the different species. This allowed that visitors would notice their similarities at the beginning of organogenesis and their differences at the end of it. If you want to learn more about the hypothesis of Von Baer (1828), please read the book "Über Entwickelungsgeschichte der Thiere." If you want to read the polemical hypothesis of Haeckel (1868), please read his book "Natürliche Schöpfungsgeschichte."

The next showcase in the museum displayed awesome taxidermy monotremes, a pangolin (*Manis javanica*), a kiwi (*Apteryx australis*), and other animals that most Mexican children would never see alive in all their lifetime. After this, there were two anatomical models of humans, so children would know the internal

organs of the human body. There were also model skeletons for ancient species of humans from Africa to display human evolution. Each model clearly labeled what pieces of bones were found by paleontologists and which ones were inferred. In this hall, there were also plenty of small dioramas showing how human culture evolved since ancient Africa into our modern civilization. Finally, at the end of the museum, there were more hefty dioramas, such as the ones seen in the ecosystems' hall. These dioramas also showed full ecosystems. They had taxidermy animals such as eastern gray kangaroos (*Macropus giganteus*), tigers (*Panthera tigris*), jaguars (*Panthera onca*), lions (*Panthera leo*), giant pandas (*Ailuropoda melanoleuca*), brown bears (*Ursus arctos*), polar bears (*Ursus maritimus*), moose (*Alces alces*), reindeers (*Rangifer tarandus*), American crocodiles (*Crocodylus acutus*), &c.

Lecture Hall

In the museum, there was a lecture hall where there was a biologist that taught lessons to the public that visited the museum. One day, he said that if the Cretaceous-Paleogene mass extinction had not happened, *Stenonychosaurus inequalis*, a smallish feathered non-avian dinosaur would have evolved to become a creature that looked the same as the extraterrestrial people of folktales that are called the "gray aliens." In science fiction and in urban legends, these guys abduct human terrestrial people to their spaceships that look like flying saucers. There, the aliens perform urological or gynecological surgeries on their victims.

Another day, the same man said that cobrotoxin is the most lethal animal toxin. I corrected him. I told him that it was not true. I told him that batrachotoxin was more lethal. As a result of my opinion, the man was wrathful. Nonetheless, I was right. On the one hand, cobrotoxin has a LD_{50} that is equal to 0.09 mg/kg. On the other hand, batrachotoxin has a LD_{50} that is equal to 0.002 mg/kg. Marisol, my mother, considered that I was a child genius because I was six years old, and the biologist had already obtained a bachelor's degree. In fact, I was not a genius. I read about the toxicity of batrachotoxin in the books that my uncle Jorge Reyes Mejía gave to me as gifts.

Museum Shop

The museum shop was fascinating. There were products that could not be bought anywhere else. There were mineral specimens for collectors. There were books about non-avian dinosaurs. There were small models of non-avian dinosaurs. There were also illustrated plates that were not bound into books known as "monografías." These plates include several minute images with information written about them on the back. They can be cut using scissors and are employed in classrooms. Mexican schoolteachers ask their students to purchase them to embellish their essays in their notebooks. All the products of the shop that included the museum brand had a logo that was the full body of the white skeleton cast of *Diplodocus carnegii* with its tail resting on the floor.

Scenic Train of Segunda Sección de Chapultepec

After exiting the main buildings of the natural history museum, my parents always bought me a soft drink. It was always of the trademark of soft drinks named Chaparritas. Immediately north of the museum, there was a train station where sightseers could board a little scenic train (19.410982839098583, -99.2015401029605). I always went there with my parents after visiting the museum. The railway line ran through the parks of the Segunda Sección de Chapultepec. The tour was brief but joyful. The railroad ran through a tunnel below the avenue known as Avenida de los Compositores. After that, it ran through the groves that were found between the avenues Avenida de los Compositores and Avenida Bosques. After that, the train went again inside a tunnel below the Avenida de los Compositores. It traveled further east until reaching Lago Menor de Chapultepec, an artificial lake. At the lake, there were geese (*Anser anser*) and ducks (*Cairina moschata*, *Spatula clypeata*, *Anas platyrhynchos*, *Anas diazi*, & *Oxyura jamaicensis*). Tourists rented small boats there to sightsee on the lake.

The railroad ran to the east of a restaurant named Restaurante del Bosque. The train then followed the banks of Lago Menor de Chapultepec. From there, one could see an island where there were spouting fountains that spewed water to a considerable height. Later, the train accessed a long, dark tunnel that exited right to the south of the building of the Museo de Historia Natural de la Ciudad de México named after Oparin's book. That train does not exist anymore... Most of the trees in the groves where the train traveled belonged to the species *Hesperocyparis lusitanica*, *Cupressus sempervirens*, *Yucca guatemalensis*, *Phoenix canariensis*, *Eucalyptus camaldulensis*, *Schinus molle*, *Ligustrum lucidum*, *Fraxinus uhdei*, and *Jacaranda mimosifolia*.

Lamentation

The natural history museum does not look anymore as it was during that long-gone golden age. One of the few things that remains the same is the sculpture of Copernicus holding an herb (*Convallaria majalis*). Copernicus is still looking at the museum, where his heliocentric theory is not taught anymore to children... Compared to how the museum was in the 1980s and 1990s, the museum is now shit. When I was a kid, the museum was as good as any European or American first-class museum. Now it looks like any average, mediocre museum of a poor, developing country.

When I was a kid, I went to visit the museum every Sunday. Such visits continued until my father cheated on my mother with Nora. After that event, my father ignored me. I kept visiting the museum with my mother during the holidays, but not as frequently. I also used to visit the museum after going to doctor's appointments with Dr. Octavio Martínez Natera because his office was nearby.

Arthropod Collection

Now I have finished describing all the parts of the museum that do not exist anymore.

However, there are parts that are still the same—the arthropod collection and a building known as Cárcamo de Dolores. Nevertheless, the authorities of the museum are so ignorant, destructive, and vandalic that these attractions may be destroyed in a few years' time as well. This is a slippery slope fallacy. Nevertheless, very often, slippery slope arguments become true, as when economist John Maynard Keynes warned after World War I that if the settlement of the war would not be modified, there would be a new world war in 20 years' time. There was, of course, World War II roughly 20 years later. Keynes said this in his book "The Economic Consequences of the Peace" (1919).

Unlike the Smithsonian or the American Museum of Natural History, the Museo de Historia Natural de la Ciudad de México mostly caters to young children that want to learn, not to academia. However, there is an exception to this rule. That is the arthropod collection. This collection has many scientifically important type specimens and is visited by professional researchers. Therefore, it features many scientific projects. The arthropod collection is kept in several wooden cabinets. Unlike the entomology collection in the Instituto de Biología de la Universidad Nacional Autónoma de México (UNAM), it is not mostly empty. Most of its cabinets are packed. However, the room where it is contained is by far smaller and it does not include just insects. It also includes other species of arthropods. A few boxes have an assortment of several taxa that the old lady who is the curator shows to everyone. Most other boxes are organized taxonomically.

Description and discussion of the mural painting "El agua, origen de la vida en la Tierra" by Diego Rivera (1951)

Cárcamo de Dolores is a building that is not inside the museum. It is in another part of the park called Segunda Sección de Chapultepec (19.412830424074357, -99.1980251500853). As well as the arthropod collection, it has not been destroyed by the authorities of the museum. Cárcamo de Dolores is an old building, older than the rest of the museum. Segunda Sección de Chapultepec is found in a plateau known as Tabla de Dolores. To the west of it, one can find the steep volcanoes of the Trans-Mexican Volcanic Belt. To the east of it, the flat lower lowlands of the former Lake Texcoco. It is because of Tabla de Dolores that the nearby graveyard is known as Panteón Civil de Dolores. For the same reason, part of the system to deliver water to Mexico City—made in what is now Segunda Sección de Chapultepec—was christened as Cárcamo de Dolores. When the system to deliver water was made, there was not even a public park there. Cárcamo de Dolores was once full of water from the Lerma River that was moved toward Mexico City. The mural was found underwater at that time. This building was made in 1951 during the reign of President Miguel Alemán. The first sight there is a huge fountain, the "Fuente de Tlaloc." It is a large pool with a sculpture of a running God in the middle of it. The God is Tlaloc, the patron of waters in Aztec religion.

However, in this fountain, He is not depicted as the Aztecs depicted Him, because Tlaloc only has one face. In the fountain, He is depicted as

the Roman God Janus because he is two-faced. This sculpture also reminds us of the two-headed mummified genies painted on the ceiling of corridor H of ancient Egyptian King Ramesses VI's tomb.

I walked over the fountain sculpture when I was a kid. This fountain was designed by Diego Rivera (1951). The building where the mural is found has gargoyles that somewhat look like snake heads. That is an allusion to the dragon God Quetzalcoatl from ancient Mesoamerican mythology. The mural by Rivera (1951) that, as has been said previously, was made to honor socialist Soviet biochemist Oparin is quite complex. It is titled "El Agua, Origen de la Vida en la Tierra." It is painted in a rectangular pool that formerly was filled with water. It has a tunnel on the west side. On the south wall, there is a naked man painted. On the north wall, there is a naked woman painted. The east wall has many engineers and bureaucrats painted. The floor has plenty of organisms painted...

Now I shall describe the wall with the tunnel. Above the tunnel, there are two hands holding water and throwing it over all the murals. At both sides, there are persons working, including two builders digging the rock. Ahead of each laborer, there are men giving water to other persons in bowls. The man to the right is giving water to an elderly lady, and the man to the left gives some to a young girl. Ancient Greek philosopher Anaxagoras thought that a male is born when the sperm that leads to conception comes from the right side of the body. He also thought that a female is born when the sperm that leads to conception comes from the left side of the body. Therefore, Diego Rivera painted a man on the right wall and a woman on the left wall.

The nude man is a Black African guy. His reproductive organs are shown as if they were dissected. On his left, there is a boy with a dressed-up pet monkey (*Ateles geoffroyi*). On his right, there is a plant (*Zantedeschia aethiopica*) and some persons swimming. Below him, there are plenty of species such as a jelly (*Rhizostoma pulmo*), a skate (*Rostroraja texana*), ray-finned fishes (*Carassius auratus*, *Mayaheros urophthalmus*, & *Chirostoma estor*), an axolotl (*Ambystoma mexicanum*), a frog (*Lithobates berlandieri*), a snake (*Thamnophis eques*), a turtle (*Trachemys venusta*), a sea snail (*Parametaria dupontii*), and a crab (*Callinectes bellicosus*).

The nude woman is an East Asian lady. Her earrings are made of jade ($Na(Al,Fe^{3+})Si_2O_6$), a stone that is considered precious in China. She has an hourglass body shape. Her innie navel has a prominent linea nigra crossing it, to show us that she is pregnant. Her uterus can be seen as if it were dissected. She is pregnant, as a fetus is found inside of her. The fetus is visible to all viewers. On her right, there are extremely thirsty persons who seem poor. One is a rural mother with her child and the other is a man dressed as a factory laborer.

In the background, there is an Aztec house, a Spanish colonial building, and a modern Mexican building that show the history of Mexico. At the left of the central nude woman, there is a family engaged in horticulture and agriculture. In that area, there is a cactus (*Disocactus ackermannii*) blooming. There is also a maize plant (*Zea mays*) there showing its

male inflorescence. Botanists refer to the male inflorescence of maize as its tassel. Below the naked woman, there are plenty of species such as lampreys (*Entosphenus tridentatus*), ray-finned fishes (*Astyanax mexicanus* & *Lagocephalus laevigatus*), an axolotl (*Ambystoma mexicanum*), a snake (*Thamnophis eques*), a crocodile (*Crocodylus acutus*), crayfish (*Procambarus clarkii*), and a crab (*Cancer productus*). There are also cells, including a cell in metaphase and a zygote. The metamorphosis of the Río Grande leopard frog (*Lithobates berlandieri*) is also shown.

The wall with the bureaucrats and the engineers shows them discussing a plan, very likely the works to send water from Lerma River to Mexico City. Below that, there are atomic models. Most of them are dot and cross diagrams. Except one that also seems to have P suborbitals with the shape that they have in real life. There are some formulae of chemical compounds written on that wall.

The lower mural on the floor also depicts dot and cross diagrams of atoms. In a way, the whole lower mural looks like a large cell with a big nucleus inside of it. The organelles of this big cell are not truly organelles—they are several species of creatures. The organisms depicted include single-celled eukaryotes and multicellular animals. It is a cell composed of several other organisms.

If you want to know the clades to which these creatures belong, please read the work by Montañez Godoy and Gloria Almanzar (2012) in their paper "Clasificación de seres vivos" in the book "El Agua, Origen de la Vida en la Tierra: Diego Rivera y el Sistema Lerma." The only individuals that they determined to the species level were *Giardia duodenalis*, *Gonium pectorale*, *Coelographis regina*, and *Entamoeba histolytica*. Unfortunately, the system of classification of these authors is not based on evolutionary biology. It is an artificial classification, but not as old as the one by Aristotle that was previously outlined. It is the highly paraphyletic system put forward by Robert Whittaker (1969) in his paper titled "New Concepts of Kingdoms of Organisms." It was published in "Science" 163 (3863): 150–160. Most people have already forgotten this old-fashioned system of classification, but my classmate Birgitta the First still believed in it in 2005!

Now, I will attempt to decipher the meaning of Rivera's work of art. First, it endorses the false belief equating biological evolution with progress. The reason is that we see how the single-celled organisms and basal water invertebrates in the floor become plants, vertebrates, and arthropods in the lower part of the walls and finally become humans at the top of it. The satirical dressed monkey confirms that humans are monkeys that reached the apex of evolution, the tallest level in the mural. Furthermore, the humans at the top of the mural are persons that are progressing. Their progress is seen in the transition from the Aztec house to the modern building. Equating biological evolution with progress is a view of Jean Baptise Lamarck (1809), published in his book titled "Philosophie Zoologique ou exposition des considérations relatives à l'histoire naturelle des animaux." This view was useful to justify European colonialism, as some Europeans believed that European civilization

was the top of cultural evolution, and the other civilizations were still evolving to reach that point. They justified their beliefs with the fact that biological evolution is true. Someone who believed in social development toward a European standard as a form of biological evolution was Edward Burnett Tylor (1871) in his work "Primitive Culture, researches into the development of mythology, philosophy, religion, art, and custom."

This view is ethnocentric and racist, as it infers some cultures are inferior to others. This mural shows that Rivera equated biological evolution with progress. I am not imagining this just by subjectively looking at his painting. He, himself, told that to Gutierre Tibón regarding the evolution of plants. Tibón (1983) reported it in his book "Aventuras en México 1937–1983: con los elogios de los estados desde Aguascalientes hasta Zacatecas, y dos incursiones en el Exméxico." (The reasons why evolution and progress are not the same are discussed in the next section of this essay.) Another interesting idea shown in the Cárcamo de Dolores mural is Haeckel's recapitulation hypothesis. It was previously discussed in this appendix. It is because of this hypothesis that the development of the frog is seen along the evolution from water to land until reaching the human species. Another Haeckelian motif is the pregnant woman whose fetus is shown. The fetus in a way is "evolving" out of water as the frog tadpoles. The "water" is of course, in this case, the amniotic fluid.

This mural also shows how water is a life-giving substance. That is why it celebrates its importance in satiating the thirst of the needy. The laborers are the workers that are building the works that carry water from Lerma River to Mexico City; that is why they are providing water for the people. Persons swimming and growing plants also depict the importance of water. Poor workers are highlighted in Rivera's work because he wanted to make art that would follow the same principles that Anatoly Lunacharsky outlined for socialist or communist art. He wanted to make revolutionary art for the proletariat.

However, Rivera was a contrasting man. Even if he was openly a Marxist, he always worked allied to the capitalist bourgeoisie that ruled Mexico, including presidents and top politicians. In a way, Rivera and Frida Kahlo were as hypocritical as the French existentialists, such as Jean-Paul Sartre, that criticized the bourgeoisie and its values when they in fact lived as bourgeoise and mingled with the bourgeoisie. Rivera even worked for millionaire American entrepreneurs. Hence, in his mural, he also depicted rich persons, such as the bureaucrats and engineers that are planning the Lerma system to deliver water to Mexico City. They belong to a different social class than the poor laborers' class because they neither dress the same nor are depicted in the same part of the mural painting. This shows they do not mingle with the poor. This is not entirely a Marxist mural, even if it was dedicated to Oparin, because the members of the rich elite of capitalist Mexico are not depicted as villains abusing the poor, but as needed to improve society.

The way the East Asian woman is depicted is racist. Her skin color is as if she had jaundice, a liver disease that increases the amount of bilirubin in the blood. Nonetheless, the color is

not a reference to a disease, but to the fact that Europeans in their racist classifications of humanity described East Asians as yellow skinned. This obviously implied they were different to Europeans and inferior to them. To read the work of someone who believed this, please read the book by Johann Friedrich Blumenbach (1795) that is titled "De Generis Humani Varietate Nativa."

I find the detail of dissecting the genital organs of the Black guy, including his large penis, racist. In old times, when Blacks were not seen as equal to Whites and slavery was practiced, it was thought that Black men were more eager to have sex than Whites. A man who believed this was Founding Father Jefferson (1788). He explained his racist views in "Notes on the State of Virginia." These kinds of ideas were the intellectual background to the Tuskegee Syphilis Study, where Blacks were left without any treatment when infected by the bacterium *Treponema pallidum*, a sexually transmitted, infectious pathogen. This is not a conspiracy theory. This study where patients were not informed that they were being structurally abused by the United States Public Health Service indeed happened. You can read about it in the article by Jean Heller titled "Syphilis Victims in U.S. Study Went Untreated for 40 Years." It was published in "The New York Times" (July 26, 1972).

Rivera keeps the Black man naked and studies his penis and testicles as if they were mere biological specimens like the single-celled eukaryotes, echinoderms, and mollusks in the floor. In this way, he marks a clear distinction between the Black man and the other men in the mural. The distinction is both sexual and evolutive. This is an echo of the view of Black people as less evolved, as written by Carl Vogt (1864) in "Vorlesungen über den Menschen seine Stellung in der Schöpfung und in der Geschichte der Erde."

Even if Rivera was against the oppression of the proletariat by the bourgeoisie, this work of art displays his prejudices against East Asian and Black people. Rivera wanted all humans to be ruled under the same communist laws, but he did not think all humans have equally evolved. For example, he thought that the members of one of the human sexes were closer to non-human animals than the members of the other sex. He also thought that the eyes of some human populations are still like those of a brute. He said both opinions to Tibón (1983), whose book I have previously quoted.

I want to highlight three interesting species in the mural. The first interesting creatures are the axolotls (*Ambystoma mexicanum*). One is at the right of the Black man and the other one at the left of the Asian woman, a clear reference to Anaxagoras. They equate to the Anaxagorean semen, a life-giving substance. In most essays written about this mural, as in mine, axolotls are very important. That is because the government of Mexico has brainwashed all of us Mexicans to see the axolotl as a national symbol. A lot of money has been spent on propaganda that markets axolotls with all sorts of political aims. That is why us Mexicans are so obsessed with this neotenic salamander. I guess the main reason why it is so important is merely political, as there are three other species of endemic obligate neotenic salamanders in Mexico that almost look the same (*Ambystoma dumerilii*, *Ambystoma andersoni*, & *Ambystoma taylori*).

I do not think the axolotl is the most marvelous species of salamander. The South China giant salamander (*Andrias siligoi*) is by far more amazing. It would be awesome if the government of Mexico and all the educational institutions that it subsidizes would suddenly forget about the axolotl and would promote the South China giant salamander as much as the axolotl is currently promoted! But I guess that would be almost as impossible as converting the Catholic pope to Judaism. That is what Kabbalist Abraham Abulafia attempted to do when he wanted to convert Pope Nicholas III to his religion, against the pope's wishes! Abulafia was sent to jail for that! The case of the axolotl shows how Mexican chauvinism restricts the enjoyment of all the best things that exist in the world by simply ignoring whatever is not local and hegemonic.

The second interesting species in Rivera's mural is the Geoffroy's spider monkey (*Ateles geoffroyi*). It might seem strange that a monkey is depicted as a pet! But Frida Kahlo had pet monkeys of this species when Rivera was married to her. I first found out about that in the film "Coco" (2017), where she has a monkey. However, they existed in real life. Even if it seems unbelievable, Kahlo was not the first person who owned a monkey. Monkeys as pets have existed throughout history. Ancient Egyptians kept baboons (*Papio hamadryas* & *Papio anubis*) because for them, they were holy animals. According to "2 Chronicles," the magical King Solomon brought monkeys from exotic lands to Jerusalem. The cardinals of the Catholic Church kept monkeys as pets at the time of the Christian Reformation. This was stated by Ulrich von Hutten (1520) in his letter to Prince Frederick III of Saxony.

The third interesting being is a plant that belongs to the species *Zantedeschia aethiopica*. Rivera loved them. He placed them in plenty of his paintings—even where they were not suitable, such as in the Aztec Tlatelolco Market. The Aztecs never saw this African plant! If you want to see these "Africans among the Aztecs," then you should go to Palacio Nacional (the presidential offices of Mexico City). This mural is named "El Tianguis de Tlatelolco" (1945).

Criticizing the view of equating biological evolution with progress, cultural or otherwise

The mural in Cárcamo de Dolores equates biological evolution with progress, but they are totally different. Evolution may produce organisms that are suited to their environment. However, when the environment changes, what was an apparent improvement might be the cause of death under different selective pressures. That is what happened to *Sylviornis neocaledoniae* in New Caledonia. It was well adapted to living in its habitat. When humans arrived, this bird's demise soon followed... So, improvement could only apply in a specific environment, but the Earth is in constant change and hence the organisms that can be considered as the fittest or the least fit change continuously.

If progress is not defined by examining the genotype and the phenotype alone but is an extrinsic attribute of an organism that depends on the environment, then progress is not

something objectively seen in a line of descent, but a mere measure of a lineage's luck of surviving throughout time. Such a measure of luck could only be referred to as progress if it would continuously be positively increasing. That luck is, of course, not constantly increasing among lineages. If it were constantly increasing, there would not be any extinctions. There would not be, because if a lineage was surviving before, it would not make sense that it would disappear later when it would have theoretically progressed.

The individuals that survived the change of environment are not the ones that genuinely progressed the most, as another change in a different direction can also destroy them. Believing evolution equates to progress would mean we would live in a world where environmental conditions never change, and organisms have an infinite amount of time to keep improving in their adaptations to that environment. Yet, that is not the world where we live, as environmental conditions always change, so progressive evolution only exists in our Platonic wishful thinking. Our ancestors were able to breathe oxygen inside water, but now we can die if our lungs are filled with water. Could we refer to that loss of an ability due to specialization as progress? That would mean progress is sometimes maiming. We sometimes exchange some functions for others, but that does not make us overall better. As this supposed "progress" is not intrinsic to a body, we always need to ask: better for what? That is not true progress, just specialization in a specific and narrow direction that might be injurious in an unforeseeable future.

I see the whole idea of evolution as progress as a psychological coping mechanism that makes us believe our extinction is an unlikely reality. That is also why I think the films of the "Avatar" franchise are among the highest grossing movies, because they show us humans surviving even when Earth's biosphere was destroyed...

Let us say that Rivera did not care for the process of evolution itself, but only for the outcomes that, according to him, seemed to show a continuous improvement from prokaryotic archaea to humans. In this view, progress can be defined as an increase in complexity, such as an increase of protein-coding genes in the genome. Empirical evidence does not fit well with this model. There has not always been an increase in the number of genes throughout animal evolution. Some evolutive events involve reductions. The deuterostomes, the animal lineage that includes humans, experienced such a reduction of genes, not a continuous increase that would entail progress. This was shown by Guijarro-Clarke et al. (2020) in their paper titled "Widespread Patterns of Gene Loss in the Evolution of the Animal Kingdom" that was published in "Nature Ecology & Evolution" 4: 519–523. This phenomenon is not only seen with genes but also with organs. The human brain increased in complexity with respect to our ancestors, but at the same time, other organs such as our vermiform appendix or our coccyx became vestigial.

Equating biological evolution with cultural progress as Edward Tylor or Rivera did would mean that culture is ruled by our genes; or by acquired intracellular endosymbiotic organisms; or by epigenetic modifications of the chromatin

in our cells' nuclei. Before Rivera, there were people who promoted the view that human culture was mostly produced by gene expression, such as Madison Grant (1916) in his book "The Passing of the Great Race or, the racial basis of European history." That is not how human culture is created! We have genes that allow our brains to learn culture, but that does not mean we have genes that are necessarily expressed by building airplanes! Culture exists thanks to ideas and technology, not only because of the expression of genes that code for its features! If this hypothesis were right, you could study and modify culture using the tools of genetics and genomics. My friend Zafeiria claimed she dreamed society would one day be improved by modifying it using genetics.

Thomas Henry Huxley (1880) wrote a paper titled "The Coming of Age of 'The Origin of Species'." It was published in "Science" os–1(2): 15–20. In it, he stated that cultural innovations and ideas undergo a process of natural selection that allows us to parallel the history of the culture of a given society with biological evolution. I cannot say this is the same as progress. Western society changes a lot because it is obsessed with change and considers everything reactionary as bad or wrong. However, other societies that value traditions have continued to be hunter-gatherers, so progress is not always the outcome of "the natural selection" of culture. The idea of equating human culture with progress is ethnocentric. By the way, the tribal hunter-gatherer lifestyle does not harm planet Earth as much as us, so being reactionary is not necessarily something bad.

In Chapter 1, I suggested a hypothesis on the reasons for the decline of culture during the downfall of the Western Roman Empire. In Chapter 1 and in Chapter 24, I also suggested ways to avoid such events in future times. This might suggest I am being inconsistent by praising hunter-gatherers whose societies do not value progress. I am not inconsistent. I think we should tolerate and respect both hunter-gatherers and progressive societies. I do not think it is wrong that hunter-gatherer societies do not become progressive societies. The only reason why decline is bad for apparently progressive societies is that the members of such societies do not value cultural decline, and it is not their aim to undergo such a process. That is why in previous chapters I gave tips on how to avoid it. If it is the will of the citizens of a culture to avoid any progress whatsoever or to culturally decline, I respect their desire to do so.

A history of the natural history collections before 1964

Now, I will tell the history of the natural history museum. If you have a question regarding the history of Mexico while reading this account, please check Chapter 1. All the glorious exhibits of the Museo de Historia Natural de la Ciudad de México that I saw during my childhood were made possible by Dionisio Peláez and Ernesto Valdez in 1964. The museum was opened during the reign of President Adolfo López Mateos. Before that date, the museum was totally different. It was not in Chapultepec where I visited it during my childhood. It was in Museo del Chopo (19.44194937014594, -99.15670637161945). At that time, its official

name was Museo Nacional de Historia Natural de México. The nickname of "Museo del Chopo" was because it was on a street named Calle del Chopo. The street's name was because, in the 19th century, there was a ranch there named Rancho del Chopo.

A "chopo" in Spanish is any tree that belongs to the genus *Populus*. The ranch might have been named like that because of a tree of that genus that lived there. By the time Ángeles Mastretta—the aunt of Daniel Mastretta—was the director of Museo del Chopo, it was not a natural history museum anymore. It was a museum of modern, subcultural, and indie art as it is still nowadays. The natural history museum changed its location to Chapultepec 15 years before Daniel Mastretta's aunt was the director of Museo del Chopo (please see Chapter 11 to discover the relevance of her term as director). The Museo del Chopo became a natural history museum in 1913 during the reign of usurper Victoriano Huerta. This happened 66 years before Mastretta's aunt was its director.

I can remember that when I was a kid, there was a fair in Tuxpan Veracruz every year. It was the Expo Feria de Tuxpan. During this event, there was always an itinerant show that was quite like the 19th-century Barnum's American Museum, where showman P. T. Barnum exhibited attractions that made the audience feel horrified and surprised. The 20th-century natural history museum in Museo del Chopo was designed to be this kind of attraction. Apparently, Jesús Díaz de León, the first director of Museo del Chopo, considered that such types of exhibits would attract the Mexican public at the beginning of the 20th century. I think he was right because it was always visited by students of the Escuela Nacional de Maestros, such as my aunts Luisa and Yolanda during their youth. The museum had human fetuses inside spirit jars and adult human mummies. It also had plenty of corpses of people and other species of animals that were born with teratological deformities. The collections were full of dust. Behind the spirit jars containing dead people, there were webs made by spiders (*Physiocyclus dugesi*). This helped to create an uncanny atmosphere.

There were also attractions that were more suitable for circuses, such as the famous dressed fleas (*Ctenocephalides felis*) that were made in Guanajuato. This is how they were made: miniature dresses that were handmade by artists were pasted to the dead fleas. These attractions that produced fear, repulsion, and amazement were dearly beloved by the young students of Escuela Nacional de Maestros. Museo del Chopo of course included the usual specimens kept in an average natural history museum, but that was not what made the museum appealing to its visitors. What made it so attractive was its freak show! I never saw the horror museum because when the natural history museum was transferred to Chapultepec, the chilling attractions were removed. That was an attempt to rebrand the museum as a scientific institution and to have better bioethical standards in the handling of human remains by not showing them to the visitors. If you want to see some of the monstrous freak corpses of Museo del Chopo, please read "Catálogo de Anomalías Coleccionadas en el Museo Nacional, precedido de unas nociones de teratología," written by Román Ramírez (1896).

One of the directors of Museo del Chopo was an eccentric gentleman, Alfonso Luis Herrera. He had so much hubris, he imagined he was so wise and powerful as to be able to create life out of nothing. He agreed with Haeckel that cells are very simple mixtures of organic molecules. Now we know they are far more complex. Nonetheless, at the time, that belief was not as far-fetched as it seems nowadays. Thus, Herrera spent a lot of time mixing kitchen ingredients, hydrocarbons used in the car industry, or reagents used in chemistry labs with the hope of creating a new, man-made creature. Even if he was kind of a mad scientist, no slimy monster killed him because he was not able to synthesize any monster... I like his Nietzschean hubris.

Unfortunately, he was not sensible enough to see that one cannot synthesize life without first fully knowing how it works at the molecular level. It is good to feel that one is a God, but that is true if and only if one is truly a godlike human. To learn more about this guy and his views regarding life, please read his book "La Plasmogenia: nueva ciencia del origen de la vida" (1932).

Before Museo del Chopo was opened, the natural history collection was found in the same museum as all the collections of historical antiquities that later would be part of Museo Nacional de Arqueología, Historia y Etnografía, another museum. All of them were originally kept in the same building, the Museo Nacional Mexicano. Part of the collections of other institutions, such as Museo de la Comisión Geográfico-Exploradora and the Instituto Médico Nacional, were also sent to Museo del Chopo when it was opened.

Museo de la Comisión Geográfico-Exploradora was a museum that included the specimens gathered by the Comisión Geográfico-Exploradora (19.40393973907707, -99.19586558614036). This institution was tasked to make modern maps of Mexico and to study all kinds of geographical matters, including biogeography. Unfortunately, it was also a military tool that was used by dictator Porfirio Díaz to oppress the poor. At that time, Porfirio Díaz wanted to seize private properties in the State of Sonora. The lands there belonged to the villagers since ancient times. However, he did not recognize their ownership and wanted to seize their land by forceful means. He would then give most of the land to people who were loyal to him and who he knew had the means of production to make a lot of money out of it. The leftovers would be given to the real, legitimate owners. He sent the Comisión Geográfico-Exploradora to set the boundaries of the land that would be allocated to the people. This was unfair. It would be the equivalent today of the government seizing your house, your property, and obliging you to go live in the place they wanted, even if you were no criminal.

To find out more about how the Comisión Geográfico-Exploradora was involved in the Yaqui Wars, please read "Memoria de la Secretaría de Fomento presentada al Congreso de la Unión Correspondiente al Ejercicio Fiscal de 1909–1910" (1910).

Instituto Médico Nacional was involved in documenting the Indigenous pharmacognosy of Mexico. It had plenty of medically important organisms in its natural history cabinet (19.43089276430705, -99.14793431798323). Most of its collections

were sent to the medical school of UNAM university but some of them were sent to Museo del Chopo. The researchers at Instituto Médico Nacional had a very different methodology to the one used by modern research physicians. For example, in December 1890 when they arrived in Pátzcuaro, Michoacán, Mexico, they were told that a tree known as *Euphorbia calyculata* was toxic. The local townsfolk told them that its milky sap caused an itchy skin rash. As soon as the physicians listened to this, they quickly applied the sap to their own skin to test if the opinion of the local people was true! Not many modern researchers would do that! Physicians nowadays study toxicology through clinical cases or through model organisms, not by experimenting on themselves! If you want to know more about this expedition, please read the account by Herrera (1894) that is titled "Excursión Organizada por el Instituto Médico Nacional á Algunos Puntos del Estado de Michoacán en Diciembre de 1890." It was published in "Anales del Instituto Médico Nacional" 1(2): 53–61.

Museo Nacional Mexicano—the museum about everything, that provided most of the natural history collections later found in Museo del Chopo—was found in a historic building known as Antigua Casa de Moneda de México (19.43304503339293, -99.13044442990264). That museum was established there during the reign of usurper Maximilian von Habsburg-Lothringen. He originally christened it as Museo Público de Historia Natural, Arqueología e Historia. He ordered it to be opened in 1866 because one of the hobbies of the usurper politician was to study biodiversity. That is why he always spent time with naturalists, such as his friend Carl Sartorius and his employee Dominik Bilimek. In 1868, when the republic was already restored and President Benito Juárez was legally reigning over Mexico, an important scientific society was created. It was the Sociedad Mexicana de Historia Natural.

It became a mafia that monopolized control over the collections of the museum... They ended up being very close to the dictator, Porfirio Díaz. This society worked as a think tank for the dictatorship because it was not just involved in the study of biodiversity. It was also involved in agricultural matters and in public health issues. The journal of this technocratic society was named "La Naturaleza." If you want to see a natural history cabinet like the one kept in the 19th-century Museo Nacional Mexicano, you should visit the museum known as Museo de Historia Natural Alfredo Dugès, found in Universidad de Guanajuato, a university in Guanajuato City, Guanajuato. That museum was established by Dugès, one of the foremost members of Sociedad Mexicana de Historia Natural. From my point of view, it is currently the best natural history museum in all the country.

According to legend, a supernatural and miraculous event occurred in the very same place where the Museo Nacional Mexicano was in the last part of the 19th century: the Antigua Casa de Moneda de México. This event did not happen there when the collections were housed in the building. It happened more than three centuries before Maximilian opened his museum there and the building was not yet built. In that place, there was a special precinct of the Aztec sanctuary, a place that the Aztecs knew as Tlillancalco, the house of darkness. It

was midday and Aztec Emperor Montezuma II was meditating there when some of his subjects showed him a crane (*Antigone canadensis*) that they had just found. The bird had a mirror on its head. When the emperor stared at the mirror, he gazed upon the heavenly stars. After that, he saw the Spanish warriors approaching to destroy his empire. It was a precognitive event, because the Spanish conquistadors had not yet arrived, but the doom of the Aztecs was close at hand... The identification of Museo Nacional Mexicano as the former location of the house of darkness was made by Elsa Hernández Pons (2016) in her paper titled "Si las Paredes Hablaran... Algunas modificaciones arquitectónicas al Museo Nacional." It was published in "Boletín de Monumentos Históricos" 37: 152–174.

Before the reign of Maximilian, Museo Nacional Mexicano used to be in the university that was named Nacional y Pontificia Universidad de México (19.431147915127394, -99.13168898815181). It was in 1825 during the reign of the first president of Mexico, who was nicknamed Guadalupe Victoria, that this university museum was opened. The natural history cabinet was moved there because Lucas Alamán wanted it to be used to teach the students at the university. In 1823 after the fall of the First Mexican Empire, something incredible happened. The authorities of Mexico kept a sculpture of an Aztec Goddess buried. At that time, William Bullock requested to see the Deity to be able to copy her and exhibit her in the Egyptian Hall, his private London attraction. After the Deity was unearthed, she was publicly exhibited in the university. The Indigenous people went to secretly worship the Deity and left flower offerings to her. Indigenous people still believed she was a Deity, even if she was not a Catholic saint! It is not surprising that the Catholic elite kept her buried. This sculpture was later placed in Museo Nacional Mexicano. To read this and other stories of old Mexico, please read the memoir by Bullock (1824) that is titled "Six Months' Residence and Travels in Mexico."

In 1854, during the reign of dictator Antonio López de Santa Anna, something exciting happened. Sumichrast, a naturalist, found the skin of a white-tailed ptarmigan (*Lagopus leucura*) in the bird collection of the university museum. It was collected in the Most Holy Popocatépel, a volcano. Sumichrast (1881) reported this bird as a new register for Mexico in his paper titled "Enumeración de las Aves Observadas en el Territorio de la República Mexicana." It was published in "La Naturaleza" 5: 227–250. That is something very thrilling! If that ptarmigan truly came from there, it was a relict population that was trapped in the high-altitude summit of the volcano since the last Ice Age! The closest place to the Most Holy Popocatépetl where there are nowadays white-tailed ptarmigans is Santa Fe Baldy, a mountain in New Mexico, United States of America. This place is found 1992 km away from the alpine tundra of the Most Holy Popocatépetl. The bird found by Sumichrast was maybe even an endemic Mexican species. Unfortunately, that specimen was eaten by dermestids (*Dermestes* or *Anthrenus*)...

Before the independence of Mexico, the natural history collection was known as Gabinete de Historia Natural de México. Since 1802, during the reign of King Charles IV of Spain, it was in

Colegio de San Ildefonso (19.436156956265588, -99.13094436169497). It was a college that at other times was a high school. My uncle Jorge Reyes Mejía studied high school there. He did not see the natural history cabinet in his school, as he was studying there 129 years after the natural history collection was removed. When the natural history cabinet was there, there were not as many paintings as nowadays. Most tourists visit it today to see its paintings made by famous artists.

One of these is a mural by Fermín Revuletas (1923) about the Virgin St. Mary of Guadalupe that is titled "Alegoría de la Virgen de Guadalupe." It shows the Virgin as she appears in her icon in the Basilica of Our Lady of Guadalupe. There are also golden clouds in the background that resemble a pyramid. There are also plenty of persons. There are plants that belong to the species *Yucca filifera*, *Agave salmiana*, *Opuntia ficus-indica*, and *Lophocereus marginatus*. This mural is not the most outstanding one in San Ildefonso college. However, it is the one with the most unusual history.

This happened during the reign of President Álvaro Obregón, 98 years after the natural history cabinet was removed. One day, José Vasconcelos, the government minister who commissioned this mural, found the assistant of the artist painting it and not the main artist. Vasconcelos decided to pay the salary to him and not to his master. The apprentice gave most of the payment to his master. When Vasconcelos learned this, he stopped paying for the painting. Fermín Revueltas, the master painter, decided to go on strike. It was a one-man strike. He came one morning with a gun and threatened the staff of the high school. He ordered them to close the doors, or he would kill them. Then he prevented the students and the teachers from entering the high school. David Alfaro Siqueiros, a fellow muralist, asked Vasconcelos to pay Revueltas's salary and the minister gave him the payment. Both Revueltas and Siqueiros went to a bar and spent all the money drinking drinks with ethanol (C_2H_6O). To dig deeper into this anecdote, please read the book by Siqueiros (1977) titled "Me Llamaban el Coronelazo: memorias de David Alfaro Siqueiros."

Before 1802, the natural history cabinet was in another location. This original institution was established in 1790, not far from Mexico City's Zócalo, by José Longinos Martínez during the reign of King Charles IV of Spain. Longinos Martínez arrived in New Spain from Spain as part of the Royal Botanical Expedition of Sessé & Mociño (1787–1803). Originally, Longinos Martínez was commissioned to send specimens obtained in the expedition to Spain, but he also decided to open a natural history cabinet in Mexico City to please his king.

There is a starting event that was witnessed by Mociño, the most well-known naturalist of the royal botanical expedition. As part of the expedition, Viceroy Revillagigedo sent Mociño to Nootka Island in what is now British Columbia, Canada. There, Mociño met an Indigenous king who had a daughter. When the girl started to menstruate, her father changed her name. To celebrate the first menstruation of the princess, games were organized. In the main game, a group of totally naked men had to fight each other for a cylinder made of wood. After

that, the princess was locked up inside her house for several months and was only allowed to eat special foods that the ritual specified. The personality of the princess changed as soon as she started to menstruate. Before that, she was always laughing, dancing, and was very talkative. After her first menstruation, she became a serious, unexpressive person that almost never talked. Not only did her name change, but she became a completely different person. To find out more about the expedition to Nootka, please read the book by Mociño (1913) titled "Las Noticias de Nutka, Diccionario de la Lengua de los Nutkeses y Descripción del Volcán de Tuxtla."

Appendix D: THE ROUTE OF MARIANA, COUSIN OF HÉCTOR JARAMILLO

The route of Mariana is a symbol of spiritual development. These are its secret meanings. It means my "Journey" from Mexico to the United Kingdom. It means my path as an apprentice of Emilio the Sage. It means my path as an apprentice of Jana the Refulgent. It means my three pilgrimages. It means any pilgrimage to a holy place. The numbers stand for real geographical coordinates in Mexico City, Mexico. If one would follow the route in the real world, one would travel through Coyoacán, Benito Juárez, Iztapalapa, Iztacalco, and Cuauhtémoc. However, this path should not be followed by walking, riding, driving, or flying it in person. It is a spiritual path, so it should be followed not by using the body but by using the mind. Hence, it is a road that needs to be followed metaphorically. To do that, you only need the set of coordinates that are shown here. It is preferred to have the coordinates printed on a sheet of paper or on a similar surface. Otherwise, an electronic screen is enough. It can also be carved in clay, stone, or any other similar surface.

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From 19.358455611281542, -99.17006050198017 to 19.35895597253265, -99.17026396904855

From 19.35895597253265, -99.17026396904855 to 19.359776097804243, -99.1717155016897

From 19.359776097804243, -99.1717155016897 to 19.360442342412814, -99.17277485170526

***Vanilla planifolia* Andrews, 1808 (Asparagales: Orchidaceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 865.**

From 19.360442342412814,
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Appendix E: 28th of March, Professor Jerzy Rzędowski's birthday

On Tuesday the 28th of March 2023, while I was writing Chapter 13 of this book, Professor Jerzy Rzędowski died. He taught me the basics of botany and plant collecting. I immediately wanted to dedicate this book to him. However, I had already dedicated it to the nine muses. I then decided not to dedicate it to him, as no man should have more priority than the heavenly Goddesses, no matter who that person is. Instead, I decided to write a prayer to honor him. I also feel that this prayer is needed because I did not like any of the obituaries written about him. They are not original or interesting. They seem like mere "Wikipedia" entries. I do not think he deserves them. An average man deserves to be remembered averagely, but an outstanding man like Rzędowski deserves to be remembered outstandingly!

All his obituaries include as a suppressed premise the opinion that this earthly life is the most important one. Hence, Rzędowski's death is seen as a tragedy. They remind me of what prophet Homer said regarding Patroclus's death in the "Iliad." This is what he said: "With these words death took him, and his ghost, loosed from his limbs, fled down to Hades, bemoaning its fate and leaving youth and manhood behind." However, death is not necessarily a tragedy, as all the botanists say. I want to argue the opposite in my prayer. Now I shall start praying.

May Rzędowski's soul be free from his body that kept him chained to this world. May his soul be reunited with the universal ether, the spirit that moves the cosmos. It will fly through the seven heavenly spheres that are ruled by the seven angel princes. The ferryman will allow Rzędowski to cross the waters of the otherworld without the need for a bribe because he was one of the righteous. He will drink water from the fountains of paradise. He will eat the fruits of the everlasting Tree of Life.

We were made after the image of God YHWH (Allah), but God is not an organism composed of cells—God is a spiritual being. When Rzędowski died, he just returned to his original godlike form. His true birthday was not when he was born in Lviv in 1926; his true birthday is when he became a holy being in Mexico City in 2023. His life in this world was not his true life; his true life started after his soul was finally free from his body. As mercury purifies gold from its ore, death purified his soul from his body. This world subjected him to suffer all the torments of the Auschwitz Nazi Concentration Camp, but after his death, he will not suffer anymore from such wickedness. This life is, as Thomas Hobbes would say of the state of nature, "a war of all against all," but after his death, Rzędowski will rest in peace. This life subjected Rzędowski to see the injustice that his work team was fired by Marie Samain and Martín Aluja, but after his death, he will not be oppressed anymore by such unfairness.

In this world that is known as Hell, he was just a subject of the fallen angels that rule it. In the other world, he will be like a prince that will be attended by the holy angels that live in perpetual

Rzedowskia tolantonguensis **González Medrano, 1981 (Celastrales: Celastraceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 866.**

bliss. As Socrates wanted to die to talk to Odysseus and Sisyphus, Rzędowski will be able to talk to Theophrastus and Linnaeus. Indeed, in the Elysian Fields he will happily dwell with them. In the Islands of the Blessed, he will herborize with Aimé Bonpland and with José Mariano Mociño.

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

PEER-REVIEWED RESEARCH ARTICLE

Appendix F: THE PUBLIC PERCEPTION OF CHARLES DARWIN IN THE UNITED KINGDOM FROM THE POINT OF VIEW OF FOLKLORE

PEREGRINUS HIERUSALEMSIS[1]

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Abstract

The public perception of Charles Darwin in the United Kingdom is eminently relevant as he is a central thinker in Western society. In this study, Fellows of the Royal Society, townspeople of Downe, Kent, and undergraduate students from the University of Edinburgh were surveyed. The importance of Darwin for each population was found by keeping a register of facts they mentioned about him. There are significant differences in the public perception of Darwin among all populations. Newly found traditional narratives not previously published were analyzed. Darwin shows all the traits associated with folkloric heroes. Tiktaalikidae, a new family of extinct sarcopterygian fossil fishes, is described in an addendum to this paper. This text was not written or illustrated using artificial intelligence.

KEYWORDS: Charles Darwin • evolution • folklore • creationism • Downe • Royal Society • University of Edinburgh • Tiktaalikidae • new family

ISBN 979-8-89283-269-4

ZooBank LSID: urn:lsid:zoobank.org:pub:D0175613-7A77-4DB2-913B-43BD737932D2

Citation: Hierusalemsis P (2025*)* The public perception of Charles Darwin in the United Kingdom from the point of view of folklore. In: Hierusalemsis P (ed.), *The Princess of the Wraiths: an herbal, bestiary, human zoo, and memoir.* Miami: Books to Hook Publishing, LLC. pp. 716–739.

Published: Saturday the 21st of June 2025 Anno Domini

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Data Availability: No datasets were generated or analyzed during the current study. All relevant data from this study is hereby being made available.

Competing interests: The author declares that no competing interests exist.

***Tiktaalik roseae* Daeschler et al. 2006 (Elpistostegalia: Tiktaalikidae fam. nov.)**

Illustration made by Megan (Violet Vyxen). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 866.**

Introduction

When I was 12 years old, my biology schoolteacher told us how Johann Gregor Mendel, a Moravian Augustinian monk, sent a letter with a brief summary of his work and his results to Charles R. Darwin, the English naturalist. Darwin dismissed such studies as useless and did not take them into account. My teacher remarked: Imagine what would have been "On the Origin of Species" (Darwin, 1859) if Darwin had accepted Mendel's discoveries and added them into his magnum opus.

Some years later, on a Saturday afternoon, some friends and I discussed the fanciful question, who are the main enemies of God? I posed the same question to some guys the next week at my high school. One of them replied: Marx and Darwin.

While attending university, a girl told me that Robert Fitz-Roy, the captain of the H.M.S. Beagle during Darwin's infamous voyage, committed suicide as soon as he arrived back in England due to the earth-shaking theory he heard from his revolutionary companion. The news had been unbearable for such a pious man. Another day, I asked another girl what she thought about Darwin's theory. She told me she believed that he was wrong because, according to her, there was a lot of evidence that showed the Big Bang theory must be wrong. She preferred to advocate a steady-state cosmology. One night, I returned from the Royal Observatory in Edinburgh to my boarding accommodation with a fellow student. As we passed the Old College Building of our university, I remarked to the girl that Charles Darwin briefly studied medicine in that building. She was extremely surprised. How was it possible, she asked, that world-famous Charles Darwin from Russia once studied at our university?

These various stories from several acquaintances have something in common: They are not just the result of lack of information regarding the main character of the stories, as there is adequate information about Darwin in science education and popular science publications. The most important feature of them is that they are legends. They are accounts with a kernel of real background that have been distorted with time. Some of them only have Darwin's intellectual prominence as the real fact behind the story, such as the stories about his Russian nationality and his ground-breaking work in cosmology. Other legends have a more complex background. For example: Mendel did send details on his work to an expert, and the expert failed to see the relevance of his work. That expert, however, was Karl Wilhelm von Nägeli and not Darwin (Lesley, 1927). Fitz-Roy did commit suicide, but not a few days after Darwin's voyage (Nichols, 2003), and it is unlikely that the reason was Darwin's theory. The legend of Darwin as an enemy of God is an abstract symbol that reflects the impact of Darwin in later philosophical and political movements. Popular imagination has made Darwin an archetypal image that embodies all those views.

There have been multiple commentaries on Darwin folklore. Commonly exposed and cited legends are: How Darwin began his voyage as an unpaid naturalist (Gould, 1977); the account that he became an evolutionist while collecting the flora and the fauna of the Galápagos

Archipelago (Rees, 2007); how he derived his most famous theory from the finches that lived there (*Certhidea*, *Platyspiza*, *Camarhynchus* and *Geospiza* (Passeriformes: Thraupidae)) (Sulloway, 1982); urban legends related to the public presentation of his theory at the Linnean Society of London co-authored with Alfred Russell Wallace (Davies, 2008); legends related to his main works (Bowler, 1988); that, according to Darwinian evolution, humans descended from extant genera of monkeys (i.e., the ones we still find roaming forests, savannahs, deserts, and mountains) (Rennie, 2007); anecdotal stories of events that happened while Thomas Henry Huxley defended Darwin's theory (Claudill, 1997); Darwin's strong links to Nazism (Weikart, 2004) or communism (Ball, 1979); that Darwinism is atheistic (Ruse, 1998) (compare with legend of main enemies of God); Darwin's conversion to Christianity before his death (Moore, 1994); &c. All such stories can be read in multiple publications.

However, those studies have been centered on public misconceptions and misinformation. It is true that, for the folklorist, the most interesting parts of public opinion on Darwin are legends (Brandt, 1971), and so I started this report by quoting legends I personally heard in previous years. Nevertheless, other public perceptions of Darwin that have become part of the traditions of modern society are just as relevant, regardless of their historical accuracy. A Darwin false statement and a Darwin fact can be spread in the same way (Caton, 2007) and have the same cultural value and impact. For a member of modern Western society, the Darwinian chapter of the "Victorian Matter of Britain" might include both real facts and legends. Unless readers are aware of the legends being false or inaccurate, they treat them with the same historic veracity. Hence, a real fact can be equally relevant for a holistic folkloric study of society. As real facts are also found quoted in authoritative books, academic papers, and other serious materials, either primary sources or the work of commentators, they are not included in folkloric studies of Darwin. Nevertheless, in field ethnographic research, they provide an indication as to which real-life events related to Darwin are the most important ones for society in general, even if these facts do not necessarily correspond to the most important ones for science.

Such discrepancies between science and society could take place in the United Kingdom, as it has been found that in the United States of America, at least in the case of acceptance of evolution, there is a significant difference between the scientific community and the general public (Scott, 1997). The main intention of this ethnographic study was to do a public survey of the views held in contemporary British society on Darwin, his work, and his contributions. Public views about both true elements of his life and his work as well as legends were analyzed and compared in three different samples from three different groups. This study was undertaken in the last half of 2008, as 2009 was the 200th anniversary of Darwin's birth and the 150th anniversary of the publication of "On the Origin of Species" (Goodman, 2008).

Darwin folklore has been documented in three main ways: 1) texts that intentionally misinterpret anything related to him, such as the work of creationist apologists; 2) texts that

accidentally report an error due to a mistake of the author; and 3) studies of academics interested in debunking or analyzing popular narratives that include false statements. The present work shares with the third type the interest in analyzing popular narratives. Moreover, this study goes beyond previous studies in looking for public perceptions of real facts from the folkloric point of view. In addition, most previous works were analyzed by their authors using the methodology of history or philosophy of science. The only exception to this, to my knowledge, is the study on Darwin fish by Lessl (2007), in which he contrasted the symbols of the Christian ichthys cf. *Sarotherodon galilaeus* (Perciformes: Cichlidae) against the scientistic cf. *Tiktaalik roseae* (Elpistostegalia: Tiktaalikidae fam. nov.) in cars.

The present work is the first holistic study of Darwin folklore using the tools of field anthropology, and thus surveys of creation vs. evolution (Duncan & Geist, 2004; Plutzer & Berkman, 2008) are methodologically the more related works. Nevertheless, in this work, the personal beliefs of surveyed individuals on the creation vs. evolution issue were not asked. Most people who were remarkably in favor of or against Darwin, however, showed their views in this respect in their responses. In contrast to most creation vs. evolution surveys, the answers in this study were not discrete, but a brief discussion was encouraged. The questions were specially devised to enhance testimony, as it has been found that open-ended questions encourage surveyed individuals to be more engaged in interviews (Wells et al. 2000).

Materials and methods

The first group surveyed comprised the fellows of the Royal Society. The Royal Society awards fellowships to the most relevant scientists, technologists, and engineers of the United Kingdom and the British Commonwealth. The relevance of this population is that they are the most important living members of the British scientific community. Their views were expected to echo the views of science.

The second surveyed population comprised the undergraduate students at the University of Edinburgh from all disciplines. The relevance of this population is that it shows the views of young citizens across different disciplines.

The third population surveyed comprised the inhabitants of Downe, Kent. This third group reflects opinions on Charles Darwin from the locality where he lived for most of his life. It was expected that this population might have had an important view of him, as a place related to him is found in the locality (Down House). Thus, his relevance was expected to be strong in this group.

Fellows of the Royal Society[1] were selected randomly from the fellowship list using the Random Integer Generator (© 1998–2008 Mads Haahr, School of Computer Sciences and Statistics, Trinity College Dublin). The results from 25 fellows were used for this study. An email containing the following questions was sent to the randomly selected fellows:

1) Briefly outline the life of Charles R. Darwin.

2) What do you think is the most important contribution of Charles Darwin to modern society?

3) Do you know any anecdotes related to the life or the work of Darwin?

The same questions above were also posed to resident adults and teenagers from Downe, Kent, and irrespective of any other variables. I walked through the streets and visited pubs, church services, and the world-famous Down House asking people the same questions. 25 individuals were surveyed.

The same questions were posed to undergraduates of the University of Edinburgh. All students were surveyed in Teviot Row House, a social center for the Edinburgh University Students' Association. A probable bias to this study is that individuals with specific personalities may tend to visit Teviot, whereas others may prefer to be in other places. As far as my personal experience, most students tend to frequent this place. Nevertheless, some of them might visit it more frequently and hence a biased personality type might have been more frequently surveyed. Other variables, rather than place of survey and affiliation, were not accounted for. Another bias in this study is that results from degrees with a greater number of matriculated students were more represented. That is not a problem, however, as a popular British university is a good sample for estimating the ratio of students per subject in the United Kingdom. 25 individuals were surveyed.

Results

Answers were not restricted to each of the questions. Some facts, such as the theory of evolution by natural selection, were registered as answers to every question in the three samples of the study. It is expected that cited facts are the most relevant for each population. Fellows of the Royal Society cited more facts than the other two populations in their responses (Table 1). The second sample that provided a greater number of facts was that of Downe villagers (Table 1). Edinburgh University undergraduates cited the fewest number of facts (Table 1). This shows for which populations Darwin is more relevant. In general, legends were more common in the villagers' sample than in the other samples. Legends about Wallace, however, were more abundant in the undergraduate sample and those about the Galápagos finches in the Royal Society sample. From the overall results, it could be inferred that a fact is more relevant to a given population when it deviates from the common trend (e.g., more people in the villagers' sample mentioned it than in the sample of fellows of the Royal Society). Relevance of facts and/or false statements for each population can be due to geographical locality (e.g., the importance of Down House for Downe villagers (Table 1)) or to age group (e.g., villagers are more concerned with Darwin's family life than undergraduate students are (Table 1)).

Another example of this phenomenon deals with academic affiliation. Undergraduates cite the time Darwin studied medicine at Edinburgh more often than they cite his time studying theology at Cambridge, even though the other populations considered the studies in Cambridge as more relevant. In the same way,

fellows of the Royal Society cited Cambridge University as their third most relevant fact, just after Darwin's theory and the voyage of the H.M.S. Beagle. These responses can be due to the fact that 40 % of the interviewed scientists are currently affiliated with Cambridge University; two scientists work in Sanger Centre, and it is unknown how many of the rest once studied or worked at Cambridge. This can be explained by the fact that people tend to identify themselves with heroes (Porpora, 1996). An undergraduate cited how dull and boring lectures at Edinburgh University were for Darwin (1887). In this catharsis by identification, the student saw himself as the hero.

Anecdotes varied widely. Fellows of the Royal Society cited mostly amusing or interesting facts from Darwin's life compiled by historians of science. The other populations cited mostly legends as anecdotes. Scientists were more concerned with the theoretical and experimental contributions of Darwin to society than the other samples were. Downe villagers were more concerned with Darwin's personal life details. Scientists are the ones more focused on the religious controversy of Darwin's work. None of them showed creationist tendencies, however, which were common in the villagers' sample and less so in the undergraduate sample. This might show that creationism is directly proportional to age and inversely to the level of scientific education. The public view of Darwin has been shaped by the debate of creation vs. evolution as well as by the courses taught to school students. Citations from vastly influential books (Spencer, 1864; Dennett, 1995; Keynes, 2001) were common across the three populations as well, which shows how religious dogma, education, and literature shape the minds of a society. Three of the responses from the Royal Society sample were outstanding, up to the standard of professional philosophers or historians of science specialized in Darwin. One of those informants said it was because he was taught in his PhD work to think as deeply as possible about what is fundamentally important in whatever he would work on.

Newfound traditional narratives

Here I report new legends and traditional public misconceptions found in this study, not reported earlier as such.

(1) Humans do not descend from monkeys/apes; we just share common ancestors with them. Believing that we descended from them is a great misunderstanding of evolutionary theory.

Analysis: This misconception has been dispersed by philosophers and historians of science while trying to debunk other misconceptions. These researchers, however, are in fact the ones who do not understand evolutionary biology, or more properly cladistics. I did not find this misconception in the ethnographic survey but during the literature review. In the case of apes, we indeed come from them. If we consider apes (Primates: Catarrhini: Hominoidea) a monophyletic group, we must include the genus *Homo* (Figure 1). If not, apes would be a paraphyletic group (i.e., a non-natural taxon not based on evolutionary relationships). Hence, we are not just descendants of apes, we are indeed an exceptionally derived species of ape!

(Wildman et al. 2006.) In the case of monkeys, it depends on what is meant by that. If monkeys are treated as an evolutionary group (both New World and Old World monkeys), we are a species of monkey, as the most recent common ancestor of Old World and New World monkeys is our ancestor (Glazko & Nei, 2003) (Figure 1). Hence, we would belong to the same clade. If monkeys are two different groups of animals (a polyphyletic, non-evolutionary grouping) that are referred to by the same name (New World and Old World species), we are not monkeys. By convention, the group we would call monkeys in a natural classification is called simians. The sister clade to Old World monkeys is called apes (Hominoidea). By doing so, monkeys do not represent an evolutionary group (Figure 1). The key mistake here for the perpetuation of the misconception is to infer that a paraphyletic, anthropocentric grouping is good evolutionary practice. Philosophers and historians of science might have strong intellectual, anthropocentric prejudices that they share with the creationists they criticize. In order for the philosophers and historians to be right, only extant species of simians should be called monkeys or apes. Extinct ones (including the most recent common ancestors of clades within Simiiformes) should not be referred to in that way, which does not happen, at least in paleontology.

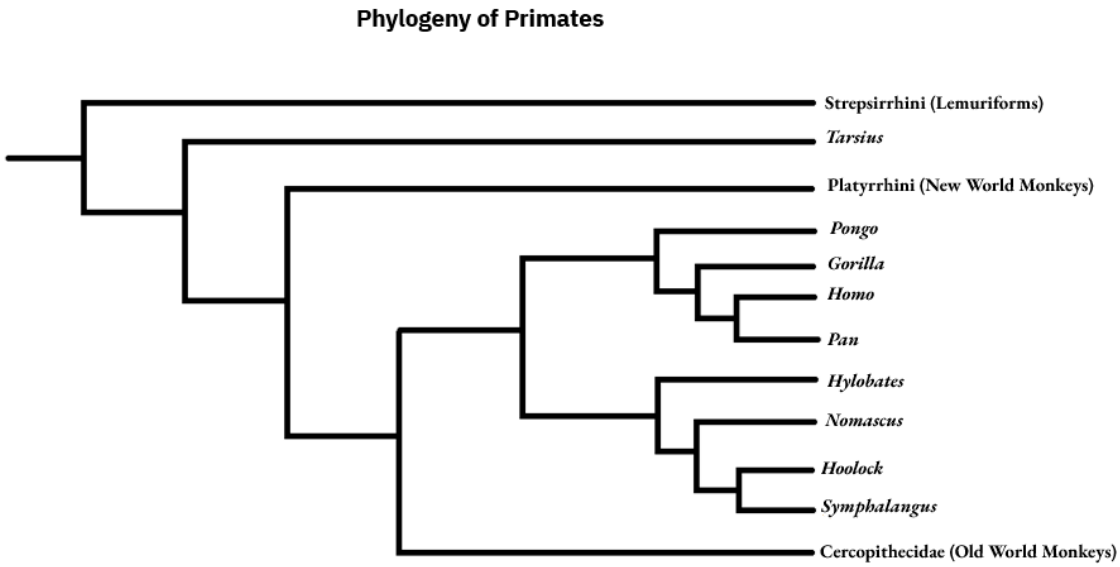

Figure 1. Phylogenetic tree of extant Primates: There is a special emphasis on the evolutionary relationships of *Homo* and related genera. The tree is based on the phylogenies by Perelman et al. 2011 and Shi & Yang, 2018.

2) The father of Darwin's wife was a vicar.

Analysis: Saintly Emma Darwin was a decidedly religious, gentle lady. Even while Charles Darwin was an agnostic, she remained a fervent Christian (Healey, 2001). Josiah Wedgwood II, her father, was not a vicar. The origin of this legend that I collected from Downe, Kent, might come from her strong religious devotion and the fact that her cousin, John Allen Wedgwood, was an Anglican clergyman (Healey, 2001).

3) Darwin did not believe in macroevolution. According to Darwin (sic), his theory only accounted for intraspecific changes in phenotypes with time, and he never wanted to provide a mechanism for speciation. Darwin believed that all species were created by God YHWH (Allah) and that microevolution changed them gradually afterward, but never enough to allow the generation of a new species. Hence, there should not be any conflict between Darwinists and creationists, as both doctrines have the same tenets.

Analysis: This misunderstanding that I collected from Downe is clearly the product of creationist arguments against evolutionary theory that promote the idea that only microevolution takes place in nature (Wells, 2006). Uninformed citizens can easily gather creationist ideas and apply them as factual evolutionary theory. This phenomenon does not work exactly as the creationists would expect, as oral tradition tends to obtain references from all sorts of sources. On the one hand, scientists and educators want to validate evolution by natural selection. On the other hand, creationists say Darwin's theory is wrong and point to a supposed flaw. Popular folkloric tradition acknowledges both views. In this social phenomenon, the creationist theory is accepted as creationists appeal to scientifically uninformed people (Forrest & Gross, 2004). At the same time, Darwin cannot be wrong (because prominent scientists say so), and uninformed citizens then modify Darwin's theory to be exactly that of the creationists. In this way, they can argue that both Darwinism and creationism are right. In real life, Darwin and Wallace (1858) were obviously suggesting a mechanism of speciation when they wrote down their theory. This legend has been influenced by those (Phipps, 1983) that see Darwin as a creationist even after becoming an agnostic evolutionist.

4) Darwin was considered mad by all society in his times, including all his fellow scientists. Now everyone thinks he was right, except some Americans.

Analysis: Darwin was always part of the established scientific community. Although his theory was extraordinarily controversial, he was always supported by some scientists. It is pointless to explain that creationism is not endemic to the United States of America. Even without acknowledging the first part of the legend that shows an academically isolated Darwin, many individuals both in Downe and at the University of Edinburgh believed that

creationism is restricted to the United States of America. This is due to the important influence of creationism in that country since past times (Scott, 1997; Bergman, 1993). Yet, it does not mean that creationist ideas in the present day are found exclusively in the United States of America.

5) Darwin was not a scientist but a naturalist and thus not to be trusted.

Analysis: This is a variant of the mainly creationist idea that the writings of Darwin may not be trusted because he was in fact a theologian and did not complete a formal education in science (Howe, 2003). Natural history, though, is a form of science in which primary data required in biological studies are collected (Rivas, 1997). Therefore, Darwin was indeed a scientist.

6) The Beagle was owned by Darwin.

Analysis: This legend appeared both in Downe and in the University of Edinburgh. The fact that the voyage of the H.M.S. Beagle was so important in Darwin's life has led to the belief that he was the owner of the ship.

7) Darwin discovered a line in Indonesia that divides two biogeographical regions while traveling on the H.M.S. Beagle. This led to the discovery of the theory of evolution by natural selection.

Analysis: The H.M.S. Beagle never navigated through Indonesian waters while Darwin was travelling in it. It traveled at the same longitude further south, going from the south of Australia to Cocos Islands (Fitz-Roy, 1839) (also known as the Keeling Islands, not to be confused with Isla del Coco, Costa Rica). As with most legends, this one is also partly true. The line referred to by my University of Edinburgh informants indeed exists. Nevertheless, it was Wallace (1859) and not Darwin who discovered it. The discovery of Wallace might have been attributed to Darwin due to his co-authorship on the theory of evolution by natural selection (Darwin & Wallace, 1859). As this paper was of paramount importance and Darwin is recognized as more important than Wallace in the development of this theory (Davies, 2008), folkloric tradition might have attributed other works of Wallace to Darwin.

8) Darwin competed with other scientists to publish his theory. He won because he was wealthy and his father provided him with enough funds to set out on his expedition (i.e., the voyage of the H.M.S. Beagle), which proved his theory right.

Analysis: This legend is somewhat connected to Wallace, as he reached similar conclusions to Darwin's. Both published their theory together (Darwin & Wallace, 1859), but Darwin is more remembered than Wallace (Davies, 2008). The social class of Wallace might have been an obstacle to him obtaining enough recognition (Davies, 2008). All these elements are restructured in a metaphorical tale, in which the classist elements of the original story become more prominent. Wallace, the more obscure figure, becomes a defeated rival, rather than an ally. This might be read as a folktale that revives the classist structure of Victorian

society in the form of a narration. It might have didactic functions in warning modern British society of the threats of such social organization (it does not allow equality). It can also express modern social resentment of working classes toward upper ones. On the other hand, it could be upper class folklore directed to support the idea that money provides a greater worth to wealthy individuals over lower classes. I collected this story from the University of Edinburgh, along with all other Wallace folklore. This story has affinities with that of Darwin owning the H.M.S. Beagle.

9) Charles Darwin lived in the 18th century.

This story appeared twice in different ways. The first version would quote a date of birth for Darwin in the 18th century. In another version, he sailed with Captain Cook. This story might have appeared due to accidental transfer of the events of the life of other naturalists to Darwin's, the best known of all. This can be particularly relevant in the case of Erasmus Darwin, Charles's grandfather, who lived in the 18th century. In the case of the Captain Cook legend, the person from whom the facts are being transferred is very likely Joseph Banks.

TABLE 1

Percentages of facts and false statements found in the interviews

FACTS AND MYTHS MENTIONED	FELLOWS OF THE ROYAL SOCIETY (%)	DOWNE VILLAGERS (%)	EDINBURGH UNIVERSITY UNDERGRADUATES (%)
Darwin's birth date/place	44	28	24
Darwin's wealthy family	20	16	0
Darwin's outstanding relatives	40	0	0
Darwin's intellectual ability	24	20	12

Darwin was a naturalist	60	48	8
Beetles	8	0	0
Darwin's correspondence	24	0	0
Darwin studied Medicine in Edinburgh	44	12	24
Darwin's first academic paper	4	0	0
Darwin's Divinity degree in Cambridge	72	20	4
Adam Sedgwick	4	0	0
Darwin was a geologist	44	0	0
Charles Lyell	24	0	0
Voyage of the H.M.S. Beagle	92	44	16
Fuegians	4	0	0
Earthquake in Chile	4	0	0
Galápagos Islands	48	28	32
Galápagos finches	36	12	12
Darwin owned Harriet (c. 1830-2006), the tortoise*	0	0	4
Coral reefs	16	0	0
Emma Darwin	28	36	4
Darwin's ill health	44	8	0

Darwin lived at Downe	28	72	0
Down House sandwalk	4	12	0
Darwin's children	36	40	0
Darwin was a philanthropist	0	12	0
Darwin was a barnacle (Cirripedia) expert	28	4	0
Carnivorous plants	4	4	0
Darwin's experiments with garden/earthworms	28	8	0
Studies on domestication of animals	20	0	0
Alfred Russell Wallace	64	8	16
Thomas Robert Malthus	4	0	0
Natural selection/evolutionary theory	100	84	92
"On the Origin of Species"	56	40	32
Studies on animal behavior	4	0	0
Human origins/"The Descent of Man"	40	12	12

Religious/creationist issues	60	48	16
Thomas Henry Huxley	24	4	0
Darwin's deathbed conversion to Christianity*	0	8	4
Darwin's death/funeral	4	24	8
Darwin's negative contributions to world history*	0	28	8
Darwin's contributions to modern genetics	12	0	4
Darwn was a physicist*	0	8	4
Wendy Northcutt's "Darwin Awards"	0	0	4
Anniversaries in 2009	0	8	0

Table 1. The percentages of facts and false statements cited at interviews by fellows of the Royal Society, Downe villagers, and Edinburgh University undergraduates are shown. The numbers expressed as percentages show the proportion of people of each sample that cited each fact or false statement. With the exception of those subjects with an asterisk at the end, which are completely false, all other subjects can be reported as partly mythological or completely factual depending on the degree of historical accuracy in tradition.

Discussion

In the conflict between religious fundamentalists and evolutionary biologists, Darwin has been seen as somewhat of a messiah by certain individuals on both sides. Some fundamentalists accuse evolutionists of worshiping him as such, and some evolutionists refer to him in a reverential way, much like an enlightened holy man or the founder of a religion is addressed (e.g., "Great minds shape the thinking of successive historical periods. Luther and Calvin inspired the Reformation.

Modern thought is most dependent on the influence of Charles Darwin" (Mayr, 2000)). Be these analogies metaphors or false accusations, there is an element of truth. Humans have a tendency to idealize ancestors and heroes and to venerate them (Rohde, 1898). As time progresses, such characters become part of the culture when their life or ideas are engrained in it. Their life becomes iconic and a central part of ritual or cohesive mechanisms (Frazer, 1890, Vol. 1). Features of such traditions are remarkably similar in all times and civilizations (Campbell, 1949). As was shown in this study, Darwin is the subject of similar traditions.

There is one more point in common between Darwin and the "messiahs" of ancient sacred narratives: The common feature in traditional narratives of transfer of events. As it is well known to researchers of comparative religion, Gilgamesh, Hercules, and Samson shared many life events, such as killing a lion (*Panthera leo* (Carnivora: Felidae)) single-handedly ("Gilgamesh" 9; "Theogony" 327; "Judges" 14). The events of some heroes are transferred to others with time. The problem of this phenomenon is that, with time, it is almost impossible to know the facts of a character. The study of Darwin in folklore research is profoundly relevant in this. First, there are so many original sources that allow us to know Darwin, the real man. Second, he has developed into a legendary hero in popular culture. In the case of some legendary heroes, we do not know the original real-life events that inspired the legend, such as in King Arthur's case, but we can infer them from other evidence. Darwin could be a model legend for studying other traditional narratives. He is a good character because the legend has developed from real facts that are historically known. Hence, we can study how tradition deviates from reality with time, something we cannot do with a story that is known by tradition alone and is not supported by real-life accounts. If there is something messianic in Darwin, it is not what he discovered but that he has changed with time post-mortem as the messiahs of the ancient sacred narratives did. It has been popular tradition that has changed them.

In the present study, transference of events is the most common legendary feature. Some informants transferred the identities of Captain Cook or Captain Beaufort for that of Captain Fitz-Roy; the identity of Susannah Darwin (Charles's mother) was transferred to Caroline Darwin (Charles's sister); some events in the life of other naturalists were transferred to Charles Darwin's life; &c. The legend of the physicist Darwin (Table I) also results in transferring events from the life of other people. Beyond the girl who told me in the past that Darwin proposed the Big Bang theory, three individuals in the present survey told me a similar story. In Downe, an informant told me Darwin discovered the origin of all things natural, another that he proposed the theory of relativity. One of the students at Edinburgh said that he studied physics at Edinburgh University. This legend is very likely due to Timiryazev (1913), Teilhard de Chardin (1955) and Dobzhansky (1967), who thought that evolution can explain everything in the universe, including cosmology. I very much hope they did not mean natural selection sensu stricto by evolution (but see subsequent selectionist theories of the universe (Smolin, 1992; Dyson,

1998) that call natural selection sensu lato an ontologically different process than the one described by Darwin and Wallace in 1858, even if inspired by Darwin's 1859 work; these might have provided this legend with more elements). Popular tradition, however, identifies evolution with Darwin and thus popular folk reasoning follows that if evolution explains the universe, then Darwin stated the laws of cosmology/physics/mechanics/&c. In the absence of any law of physics discovered by Darwin, tradition transfers some laws of physics to his authorship.

Conclusions

I argue that transfer of events in traditional narratives is not a random process but rather follows certain rules. As an example, I want to focus on two characters: Jesus and the vanishing hitchhiker of Resurrection Cemetery, Chicago. In the first case, Jesus has evolved with time. At the beginning, the facts of many ancient Gods and heroes were added to his legend by pagans (to find out more about this, please read the essay by Origen titled "Contra Celsum" 37). Afterward, numerous denominations claimed new Jesus's facts, adding ideas of posterior philosophers and theologians to his teachings, claiming he taught them—or he meant to teach them (to learn about this, please read the essay by St. Augustine titled "De Doctrina Christiana" 2:40). The vanishing hitchhiker of Chicago is an attractive ghost girl who either asks for a ride to the cemetery or is run over by an unsuspecting driver. In both instances, she vanishes afterward (Bielski, 1998). The very same story has traveled widely, as similar girls appear in numerous cemeteries in numerous cities (Brunvand, 1981). The Chicagoan girl herself is not the first and is just one more incarnation of the legend.

In the first case, Jesus, like Darwin, was changed over time by adding the events of other less relevant individuals to his life. In the second case, as the ghost girl of Chicago (or any other city) is not a relevant individual for society, her event is transferred to other girls (i.e., girls buried in other graveyards of other cities). The process that drives the transfer of events in traditional narratives is that of hero worship. In the case of heroes, such as Darwin or Jesus, the events of others are transferred to them, thus increasing their worth. In the case of the common citizen (the one that is not considered a hero by society), such as the ghost girl, as her case is traditionally relevant, but she is not by herself, it can be transferred to any other town and to any other ghost. Both processes are the opposite, and they are driven by folkloric hero worship. Please see Figure 2 to understand this concept.

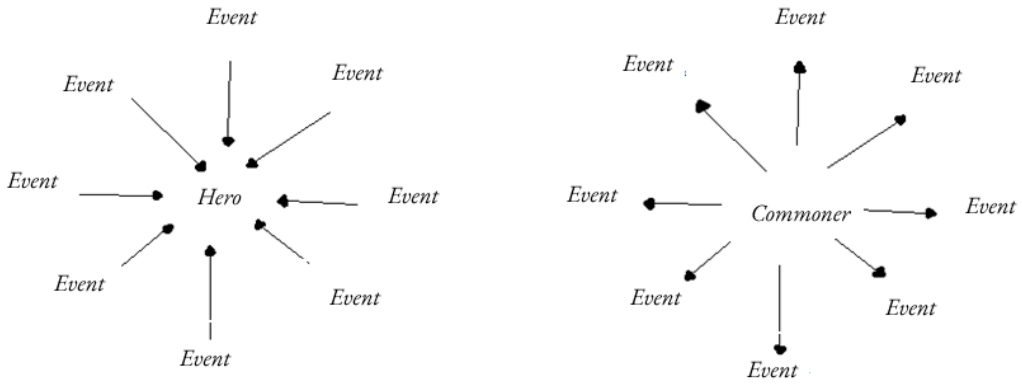

Figure 2. Proposed hypothesis of the mechanism of transfer in traditional narratives: In this mechanism, transfer of events in traditional narratives is a process driven by hero worship. In this, common individuals (i.e., socially less relevant than heroes) act as sources of events. Their events spread outwards toward other individuals or places. Heroes act as event sinks. Events are directed toward them from sources. Commoners are not necessarily the source of the event that they transfer, as the event might have been transferred from other sources (partial heroism). On the other hand, heroes can become sources of events for more socially relevant heroes (partial common status). What determines heroic status is the rate of transfer in traditional narratives.

Notes

* This paper was undertaken to commemorate Charles Darwin, and it was for his sake it was written while I was an undergraduate at University of Edinburgh, Scotland. I would like to thank all anonymous individuals from the Royal Society, Downe Village, and the University of Edinburgh that answered the survey questions; the Right Honourable Martin, Lord Rees of Ludlow (University of Cambridge), for allowing me to interview the fellows of the Royal Society; Richard Peskett for helping me gather informants at Downe; Tim White (University of California, Berkeley) for helping me with the phylogeny of Primates; and Graeme Reid (The University of Edinburgh) for his help in the ethical self-assessment for this research with human subjects.

1. For the Royal Society population, a letter asking for permission to carry out the research was sent to the president, who replied by saying that I could contact the researchers individually for my study.

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Modern addendum to this paper for this book

When the tetrapodomorph *Elpistostege watsonii* Westoll was first discovered, only part of its skull was known (Westoll, 1938). Based on this scant evidence, it was hypothesized that this was the sister species of *Tiktaalik roseae* Daeschler et al. and that their clade was the sister clade to all other more derived stegocephalians, including us (Swartz, 2012). Therefore, both species were naturally considered as members of the family Elpistostegidae Romer, as the clade containing

both seemed monophyletic (Borgen & Nakrem, 2016). Nevertheless, a complete *Elpistostege watsonii* was subsequently found (Cloutier et al. 2020). With the new data provided by this specimen it was obvious that if *Elpistostege* Westoll and *Tiktaalik* Daeschler et al. were members of the same family, this monophyletic family would need to include all known amphibians, non-avian reptiles, birds, and even people! (Stewart et al., 2022.) Hence *Elpistostege* and *Tiktaalik* need to belong to separate monophyletic families.

When I wrote my folklore study on Charles Darwin, I knew about a similar study regarding a symbol that atheists use to mock Christians (Lessl, 2007). It is a "fishapod" known as the Darwin fish. This obviously looks like a cartoon of a transitional species between fishes and tetrapods. The most similar creature to this parody that has been unearthed by paleontologists is *Tiktaalik roseae*. When I attempted to cite its family in my paper on folklore, I noticed that no one has described a monophyletic family for it, so I shall now describe it.

Tiktaalikidae Hierusalemsis, fam. nov.

ZooBank LSID: urn:lsid:zoobank.org:act:6CF21876-31EA-4A50-AAC5-98DF5BE325CF

This book was simultaneously published as a hardcover and as an online PDF/A. New Scientific names fulfill the ICZN requirements for both printed books and electronic documents.

Systematic Paleontology:

Vertebrata Lamarck, 1801

Gnathostomata Gegenbaur, 1874

Eugnathostomata Robertson, 1970

Osteichthyes Huxley, 1880

Sarcopterygii Romer, 1955

Rhipidistia Cope, 1887

Tetrapodomorpha Ahlberg, 1991

Eotetrapodiformes Coates & Friedman, 2010

Elpistostegalia Camp & Allison, 1961

Stegocephalia Cope, 1868

Tiktaalikidae fam. nov.

Type genus: *Tiktaalik* Daeschler et al. 2006

Description: Tiktaalikidae was a monophyletic group of organisms with an endoskeleton made of mineralized bones. They had an axial skeleton that consists of a skull and a vertebral column. They had ribs in their thorax. They exchanged oxygen and carbon dioxide with their underwater environment using gills. They had opposing jaws, with two tooth rows inside their mouths. Their integument had diamond-shaped scales that were true scaloids. Lateral line canals present. Their lobed fins had extremely thin ray bones distally and thick bones with articulations that are homologous to tetrapod appendicular bones proximally. Distal radials articulated.

Radius twice as long as ulna. Carpals also parallel to radius. The proximal epiphyses of the humeri articulated with the glenoid fossae. Shoulder girdle present. Palatoquadrate bones fused to the cranium. Choanae present. Hinged endocranium. Their skulls looked somewhat like the skulls of modern ***Atractosteus*** **Rafinesque, 1820,** but with broad short snouts instead of long and pointed snouts. Otic notches present. These otic notches are sometimes seen as evidence of the presence of lungs. No bony plates at the sides of the neck. Pectoral girdle separated from skull. Thus, they had motile necks. Pelvic girdles almost as long as shoulder girdles. The pelvis was a single bone.

Diagnosis: Tiktaalikidae differed from ***Tinirau*** **Swartz, 2012** by having a pelvic girdle that in height reached the vertebral column, not located far below it. They did not have anterior fins attached to the skull. Eyes located above the middle of the mouth, not close to the tip of it. They differed from **Tristichopteridae Cope, 1889** by having easily visible ribs and a long pelvic girdle that reached the height of the vertebral column; by not having anterior fins attached to the skull; and by having small eyes on top of the head, not at the sides of it. They differed from ***Platycephalichthys*** **Vorobyeva, 1959** in the side of their lower jaw where the teeth were found, as it was flattish, not remarkably curved upward. They differed from **Panderichthyidae Vorobyeva & Lyarskaya, 1968** by lacking opercula. They differed from ***Metaxygnathus*** **Campbell & Bell, 1977** in the side of their lower jaw where the teeth were found, as it was flattish, not remarkably curved upward. They differed from **Elpistostegidae Romer, 1945** by not having a pectoral fin with intradermal tetrapod-like digits, only a fin with homologous primitive radials. They differed from ***Livoniana*** **Ahlberg et al. 2000** in that they only had 2 tooth rows, not more. They differed from ***Parmastega*** **Beznosov et al. 2019** in that their orbits were slightly raised, not extremely raised above the skull. They differed from **Elginerpetontidae Ahlberg, 1995** by not having the inner tooth row set over a prominent rod-like cylindrical ridge. They differed from ***Densignathus*** **Daeschler, 2000** in the side of their lower jaw where the teeth were found, as it was flattish, not remarkably curved upwardly. They differed from **Acanthostegidae Jarvik, 1952** in that they had fins, no true manus or pes; and in that they had slender neural spines, not prominent with a broad apex. They differed from ***Ossinodus*** **Warren & Turner, 2004** in that they had fins, no true manus or pes. Ribs were not particularly reduced in their lumbar region. They differed from ***Ventastega*** **Ahlberg et al. 1994** in that the distance of the scapulocoracoid between the cleithrum and the humerus was quite narrow, not long, so overall shape of scapula blade was not heavily curved. They differed from **Ichthyostegidae Säve-Söderbergh, 1932** in that they had fins, not true manus or pes. They did not have a huge ribcage. They had slender neural spines, not massive. They had a straight vertebral column, not hunchbacked. They differed from ***Ossirarus*** **Clack et al. 2016** in that they had small tabular bones in their skulls, not conspicuous. They differed from ***Ymeria*** **Clack et al. 2012** in that their lower jaws were ventrodorsally slender, not thick. They differed from ***Aytonerpeton*** **Clack et al. 2016** in that they did not have Meckelian fenestrae. They differed from ***Perittodus*** **Clack et al. 2016** in the shape of their angular bone in their jaw, as it

was very slightly curved, not with the shape of an obtuse angle of roughly 135 degrees.

Tiktaalikidae (new clade name)

Definition: The largest clade containing *Tiktaalik roseae* Daeschler et al. 2006 but not *Elpisostege watsonii* Westoll, 1938. This is a maximum-clade definition. Abbreviated definition: max ∇ (*Tiktaalik roseae* Daeschler et al. 2006 ~ *Elpisostege watsonii* Westoll, 1938).

Reference phylogeny: Figure 4B of Stewart et al. (2022) is treated here as the primary reference phylogeny. Additional reference phylogenies include Figure 5 of Cloutier et al. (2020).

Composition: Under the primary reference phylogeny, Tiktaalikidae comprises *Tiktaalik roseae*, and *Qikiqtania wakei* Stewart et al.

Synonyms: There are no synonyms for this clade.

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End of Memoir (You may want to continue reading the next pages, the scientific part of this book)

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CONTENT WARNING

Appendix G is a University of Edinburgh dissertation. Appendix H is a research paper. Appendix I is a scientific classification of organisms. They may be too technical, may use a lot of biological jargon, may be too lengthy, and reading them might be difficult. If you are reading this book for fun, you can stop reading here. (Just keep looking at the amazing illustrations in the following pages: 743, 745, 759, 831, 839, 840, 841, 843, 845, 847, 873, & 875)

Cirsium vulgare **(Savi, 1798) (Asterales: Asteraceae)**

Illustration made by Albino Adelaido Luna. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 867.**

DISSERTATION

Appendix G

The University of Edinburgh

School of Biological Sciences

Honors dissertation

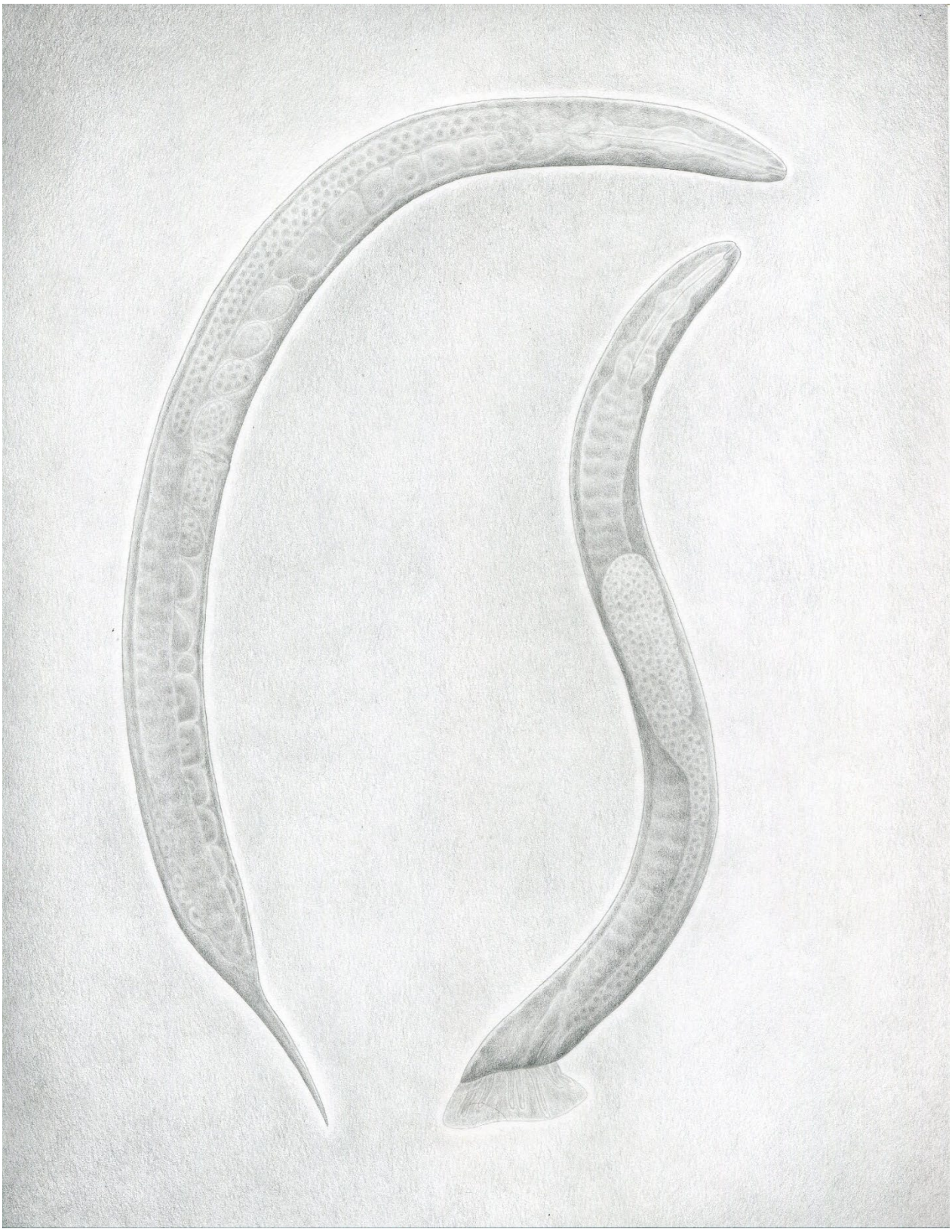
Will it be possible to decipher all the traits of a multicellular organism from the sequence of its genome alone in 20 years' time?

By
Peregrinus Hierusalemsis

A dissertation submitted in partial fulfillment of the requirements for the degree of Bachelor of Science.

December 2009

744



***Caenorhabditis elegans* (Maupas, 1900) (Rhabditida: Rhabditidae)**

Illustration made by Rafael Calderón. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 867.**

Will it be possible to decipher all the traits of a multicellular organism from the sequence of its genome alone in 20 years' time?

PEREGRINUS HIERUSALEMSIS[1]

[1] *School of Biological Sciences,*

The University of Edinburgh.

Wolpert and Sheldrake (2009) had a debate at the Cambridge Science Festival. In their debate, Sheldrake argued in favor of a theory in which supernatural fields of morphic resonance can inherit phenotypic traits from parents to offspring (Sheldrake 1981). Wolpert thought the idea was senseless; according to him, genetic information was contained in DNA, as Griffith (1928) had proved in the early 20th century. The discussion with Sheldrake led Wolpert to state that in 20 years' time it would be possible to predict the whole development of a multicellular organism just from reading its genome (Wolpert & Sheldrake 2009). The results of such a study would predict as many traits as can be inherited in a molecular fashion.

Sheldrake's theory has been criticized as unscientific (Maddox 1981), and there is still great uncertainty in Wolpert's prediction as well. On the one hand, development and a great number of phenotypic traits are encoded in the genome. Advancement of science, particularly systems biology, could eventually help us to roughly determine a great number of phenotypes from a genome, as there have been some pioneer successes using gene networks with *Caenorhabditis elegans* (Rhabditida: Rhabditidae) in this discipline (Lehner & Lee 2008; Von Stetina & Mango 2008). The well-known genome-wide association studies are also an important development. On the other hand, forms of epigenetic inheritance and cell movements during organogenesis that cannot be detected from reading only the genome make such claims almost impossible, given what is currently known.

The aim of this essay is to evaluate Wolpert's prediction and to theorize how it could take place, if possible.

Theoretical considerations

One of the points that needs to be considered in this essay is the philosophical issue of reductionism versus holism. In recent years, many proponents of systems biology have pointed out that biochemistry, cell biology, and molecular biology are reductionist approaches to the same phenomena that they study in a holistic way (Conti et al. 2007). Obviously, systems biologists do have need of the previously mentioned disciplines in order to gather and analyze data. It is thought that one of the reasons why organisms' whole development has not been predicted from their genomes is the reductionist

scope of current biological sciences. Moreover, it has been argued that a whole system is not the same as the sum of its parts—meaning that there are patterns that arise when the interactions of multiple gene products occur, as opposed to the gene sequences acting alone.

One of the reasons why people had so much confidence in genes and did not look at the interaction of gene products by themselves in the past is that, in the 20th century, the focus of biology was the gene. Hiesinger & Hassan (2005) refer to this ideological problem as the "myth of the gene as the holy grail of biology." Wolpert's prediction is clearly within this framework. An example of why this scheme cannot predict everything can be found in the tobacco mosaic virus (TMV). It has long been known that TMV particles can self-assemble in solution when in the presence of TMV RNA (Butler 1999). The proviral sequence of the virus can be translated to an amino acid sequence using a bioinformatics program or by hand, simply by knowing the plant nuclear genetic code. From this sequence alone, even if we did not know that the viral particles self-assemble in a helical structure, we could infer that the molecules can bind to each other but would not know how they actually do so (i.e., the self-assembly phenomenon in the cell cytoplasm or in vitro). The main problem with complex non-Mendelian phenotypes is that they are the result of the interaction of gene products. Knowing the amino acid sequence of a gene product by itself does not provide enough information on these interactions, largely because of the phenomenon of protein architectures. Similar protein modules are found in diverse protein complexes. In some cases, a single protein module or domain tends to have the same function. An example is DNA polymerase domains. Primase, for example, has both an RNA polymerase and a DNA polymerase domain. It uses both of them in its function.

Unfortunately, this is not always the case, owing to a phenomenon known as exaptation, in which preadapted structures can take on new functions. These new functions are not the original ones for which they evolved under selective pressures (Gould & Vrba 1982). An example can be seen in immunoglobulin-like domains found in tyrosine kinase receptors (a cell signaling function) (Sato et al. 1993), in cell adhesion molecules that adhere to cell surfaces and are used by cells to migrate to new locations during animal development (a developmental function) (Kiselyov et al. 1997), and in the major histocompatibility complexes used by vertebrates in their immune system (an immunity function) (Malissen et al. 1982). The same is true for a great number of domains and modules, meaning that even if we were able to predict the structure of a protein from its sequence and the modules it contains, its molecular interactions cannot be predicted from this data alone, unless the actual interactions were observed in vivo or in vitro. This last approach would not involve predicting a phenotype from a genomic sequence, but the opposite—assigning a function to a genomic sequence by observing the phenotype it produces.

It could be argued that the small, specific variations in domains and modules would confer different interactions. However, as far as technology allows us, it is only possible to produce the interactome of a species based on the

actual interactions of gene products and not on the genome alone (Han et al. 2002). The problem of domains' interaction with specific domains is increased by the fact that certain domains can interact with diverse molecules. For example, coiled-coil domains tend to have extremely similar structures and tend to interact with different proteins that contain different molecules. The problem is increased by the fact that in certain specific cases, such as β-catenin, the same molecule can interact with both adherence junction complexes and some regulatory proteins in the cell nucleus.

To be fair to Wolpert's idea, let us say that, in 20 years' time, all relevant proteomes will have been sequenced. Assuming that, by 2029, the domains and functions of every protein in the main model organisms will be known, there still will not be enough information to predict the whole phenotype of an organism. Most animal cells work in similar ways (that is why model organisms are so useful); however, there is a wide diversity of phenotypes in different taxa because of the subtly different interactions between the products of the different alleles that differentiate one species from another. The answer would then lie in the interactome and not in the genome. As we have previously said, the interactome is deciphered by observing actual protein-protein interactions and not by reading the genome alone. Of course, Wolpert was not talking about predicting the phenotype from scratch, as studies of all the associations between the interactome and the genome must take place before the phenotype can be predicted (see Figure 3 for the different steps that should be followed if the phenotype is to be predicted in this way). Unfortunately, there are non-Mendelian mechanisms of inheritance that would not allow this prediction to take place properly (they will be reviewed afterward).

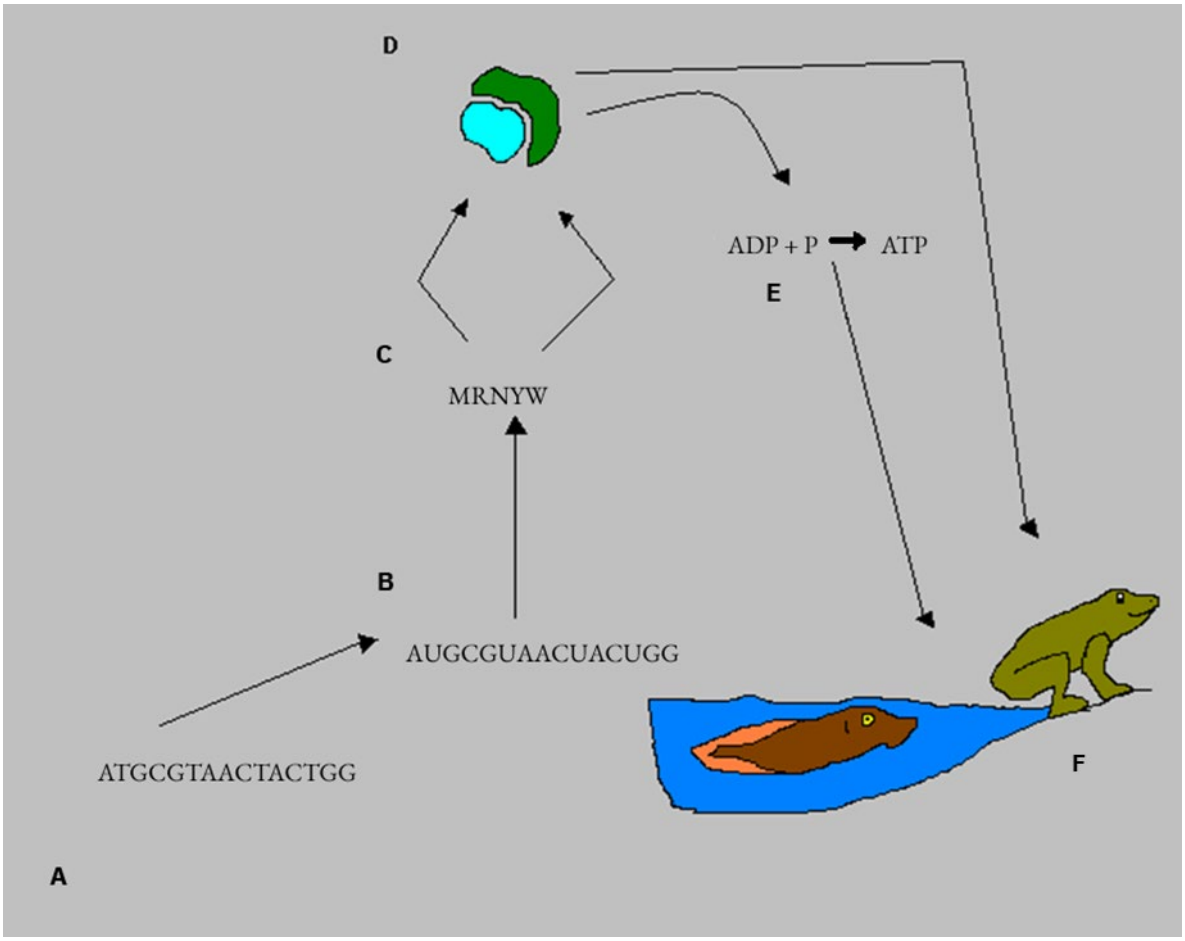


Figure 3. The different steps along different omic sciences that theoretically would be needed in order to predict holistic phenotypes from genomic sequences. A) Genomics studies the sequences of DNA. B) Transcriptomics studies the mRNAs in an organism. C) Proteomics studies proteins. D) Interactomics studies protein-protein interactions. E) Metabolomics studies the metabolic networks of an organism. F) Morphomics, the study of complex developmental networks along with physiomics, the study of physiological networks. The disciplines named in B to F should be well known in an organism to be able to associate their different phenotypes with genomic sequences through systems biology. The species of frog shown on F belongs to the genus *Rana* (Anura: Ranidae) and not to *Xenopus* (Anura: Pipidae). That is why the adult is standing on land so elegantly.

One of the reasons why Sheldrake thinks Wolpert's prediction is impossible is protein folding (Wolpert & Sheldrake 2009). Although amino acid sequences that form a domain tend to fold in highly similar ways in different species, protein turns and loops are not as highly predictable, especially because of the fact that chaperone proteins are involved in the specific folding. Those interactions cannot be predicted from the genome alone.

The main problem with trying to predict a phenotype from just a genome is the same as that of the hypothesis proposed by the renowned mathematician Pierre-Simon Laplace (1820), when he thought it would be possible to know

the whole universe and to predict its fate by knowing the position of every subatomic particle in it. He did not take into account that the whole universe is not just the sum of its components, since interactions occur at different levels of organization after initial conditions occur (Feinberg et al. 1992). The same is true for a genome with respect to the body of the organism that it produces, because, even if all genetic information is inherited in the genome (excepting the epigenome, but see more on that later), many of the results of that information are not knowable until the interactions of gene products take place. This means that not all the information that is stored in the genome can be translated at the ribosomal stage only. The only things that can be translated from linear DNA sequences using bioinformatics software are linear sequences. The rest of the information can be only "translated" by the actual, physical interactions of the gene products, as is evident when changes in the environment, such as teratogenic substances, produce defective phenotypes even in the presence of a non-defective genome. This means that the phenotypes that we observe are not only the result of the genome that produces them, but of the environments where the organism develops. The non-teratological phenotypes of most multicellular eukaryotes that we observe are not only the result of genetic information, but of the maternal effects that shape such phenotypes.

According to William Harvey (1651), every multicellular organism comes from an egg cell. The egg where an organism develops and the place where the egg is found have profound effects on morphogenesis. So even the normal phenotypes we encounter in nature are the result of environmental interactions with the genotype. Software that could predict the whole phenotype of an organism from each genome should also have phenotypic information regarding the egg cell where such a genome would be found, and of all environmental and maternal effects that usually occur during the development of such an organism, since the genome alone cannot provide such determinism. Even if a wild-type organism is produced, that wild-type phenotype is the result of the cellular environment where the genome is found. The great paradox of such a prediction is that no genome can be expressed without previously expressed gene products that are able to transcribe it and translate it. Those previously expressed gene products and their location and concentration within a cell and also the positions of cells within an organism provide the right information for gene expression to take place correctly.

By this, I do not mean epigenetic inheritance, but the cell environment where the genome is found. For example, a plant cell bounded by its strong cell wall and possessing a large vacuole is a radically different environment from a human cell. Hence, the physical space where a gene product is located is different. In general, it could be said that, since genes started to produce phenotypes, the phenotype started to influence the way the genome is expressed and how the cell maintains its shape and function. This goes beyond epigenetics, as these phenotypes do not have information that can be inherited. They are just part of the environment that shapes the way a gene is expressed. As an example, during and after the time when translation takes place in ribosomes, proteins are sorted out into different regions of a cell. However, different cells have

different morphologies. Proteins are thus sorted according to the type of cell in which they are expressed. Cell structure is a map that defines the place where proteins should be delivered. This is an important variable in a cell's phenotype.

Moreover, environment cannot be precisely predicted through computation. In experiments with *Achillea* (Asterales: Asteraceae), for example, it was found that growing genotypically identical plants in controlled environments did not produce predictable correlations between environmental variables and phenotypes (Clausen et al. 1948). Similar results have been found in other instances (Lewontin & Gross 2004).

In some organisms, transposable elements are quite active. Sometimes they can be transposed or retrotranscribed from one site of the genome to another, thus altering the final phenotype of an organism in an unsuspected way. These kinds of almost random effects could only be predicted with difficulty from genome sequence alone, as the location where an active transposable element could move could only be statistically inferred with a great error range, and with certainty in only very few cases. The reason for this uncertainty is that transposable elements tend to transpose to particular genomic sequences of DNA according to the type it belongs to, but not to a single location in the whole genome that could be predictable (Geurts et al. 2006). This variable of partial randomness could have effects on resulting phenotypes that would not be as straightforward to predict (i.e., bioinformatics software could, in principle, determine the sites where transposition could occur, the likelihood it could occur, and potential phenotypic effects, but each effect would be one in a number of other probabilities). Transposable elements can produce quite significant phenotypes in species useful to humans. Such important traits could not be predicted with certainty from a genomic sequence alone. Even if transposition did not occur in the germ line, it has relevant consequences in somatic cells, especially in plants.

It could be argued that predicting the movement of transposable elements would not be in the aims of a prediction of a phenotype from a genome. Ontologically, however, the effects of transposable elements are not the same as the mutations that occur as a result of errors of DNA polymerase, mutagenic substances, and ionizing radiation. These mutations result from environmental factors. Transposable elements, however, regardless of the reason why they transpose, are contained within the genome; hence the phenotypes produced by their movement would need to be predicted, if all information contained in the genome could be used to predict all the traits of an organism that are contained in the genome.

Epigenetics

For a long time, it was thought that all inheritance was contained in the DNA sequences that make up the genome. Nevertheless, it was found that not all inheritable states are genomic in nature, but that epigenetic modifications to DNA molecules can be inherited and have relevant effects. Therefore, epigenetic modifications could not be identified merely by reading the genome of an organism. This would lead to an incorrect prediction of likely

phenotypes under given environmental conditions.

As early as 1988, it was known that methylation patterns of chromosomes can be preserved in the germ line and inherited by the progeny (Silva & White 1988). At that time, there was a breakthrough discovery that in diploid organisms, the chromosome of each parent can be recognized because of variation in inherited methylation patterns.

One of the problems resulting from epigenetic mechanisms that would make Wolpert's prediction difficult is paramutation. Paramutations occur when one allele in the genome affects another allele in its progeny. Thus, these changes are inheritable. Such alteration is not always a result of genetic recombination. In fact, many times this phenomenon only affects other alleles via regulatory RNA or through a transfer of DNA methylation patterns (Brink 1973). In plants, paramutations resulting from transposable elements can radically change the phenotype of an organism in traits of commercial or horticultural value. This phenomenon was first described in maize (*Zea mays* [Poales: Poaceae]) (Brink 1956). This model was useful for explaining previous observations in the fungal species *Neurospora crassa* (Sordariales: Sordariaceae) (Mitchell 1955) and *Podospora anserina* (Sordariales: Lasiosphaeriaceae) (Rizet 1952). However, these deviations from Mendel's laws are ubiquitous in multiple organisms (Chandler & Stam 2004).

It could be thought that paramutation is rare in vertebrates and even unusual in mammals. However, various studies in mice (*Mus musculus* [Rodentia: Muridae]) have indicated that important mechanisms of paramutation can have effects on mouse phenotype. This RNA mediated inheritance could not be discovered just by sequencing the genome. Hence some details would be lost without this information.

The first example in mice has to do with Kit, a receptor tyrosine kinase. Mutant mice with this receptor protein have white patches. Some parents are mutants but can have offspring that still exhibit a mutant phenotype even if they are genotypically homozygous wild types. This phenomenon was discovered to be the result of RNA molecules that are inherited in the cytoplasm of the gametes (Rassoulzadegan et al. 2006). These traits could not be known if we had only the genomic sequence of a mouse. Another similar effect is seen in the inheritance of coat colors of mice due to a retrotransposon (Morgan et al. 1999), quite likely the most highly publicized mechanism of epigenetic inheritance in the last decade.

Parental imprinting would not be a problem for Wolpert's prediction, for if it were known from which parent each chromosome came, the patterns of imprinting could be known in advance. Hence, I shall not discuss these mechanisms.

There are plenty of epigenetic mechanisms in cells that are not inherited by offspring from parents. They are ways in which the cell regulates gene expression. Such patterns, although non-inheritable, can cause great differences in phenotypes. They are usually triggered by environmental stimuli and hence are the link

between genotype and environment in producing phenotypes, as can be seen in mammal developmental psychology. It is well known that stress during childhood can lead to psychological disorders (Freud 1905). The mechanism by which this happens results from different patterns of DNA methylation at genes that control behaviors in response to psychologically adverse or supportive environments during infancy (Murgatroyd et al. 2009). However, as we saw before, not all environments are external to an organism, as it is right to refer to cellular environments as well. In this sense, molecular interactions between cells in an organism are also environmental influences that affect the epigenome (Fowden & Forhead 2009). The problem with these effects is that an environmental influence over a single cell can, in principle, affect the phenotype of all subsequent cells derived from it. Genomic information can only give the clues on which gene products could be expressed, but not the rate of expression, which is highly determined by instances of epigenetic modifications. The rate of expression is important in observed phenotypic traits. As an example of how important epigenetic modifications are, main phenotypic differences between monozygotic twins arise from differences in the epigenome (Fraga et al. 2005). Furthermore, there are diseases that are epigenetic in nature; hence, to understand them, it is necessary to go beyond genomics.

An increase in epigenetic research has occurred recently. It seems that the importance of epigenetics is by far greater than what it was thought to be in the past. Therefore, to predict a phenotype, more than the genomic sequence would be needed.

What in principle could be predicted from the genome alone?

Wolpert's prediction is valid if development of most multicellular organs is not involved. For example, in principle, the complete phenotype of a single-celled organism would be by far easier to predict than that of a multicellular one. Studies with specialized software, for instance, have allowed linking specific phenotypic profiles to annotations of genomes in databases using decision trees (Oliver et al. 2003). This work has been carried out with the yeast *Saccharomyces cerevisiae* (Saccharomycetales: Saccharomycetaceae). It cannot be expected that in 20 years' time, this work could be carried out in a multicellular organism to predict the whole phenotype, as cell-cell interactions would be a completely conceptually different issue. Nevertheless, it could be used to predict phenotypes at a few cells within the tissue of a multicellular eukaryote. Ideal systems would be structures such as the vulva of *C. elegans*, as it does not change in the presence of different environments (Braendle & Félix 2009). Unfortunately, this is not the case for the whole body, as it could be deleterious for any species to be unable to adapt physiologically or epigenetically to a changing environment. Theoretically, natural selection would act against complex systems that could not adapt to the environment in the wild.

In studies of *Caenorhabditis elegans* vulva, there have been advances in trying to predict developmental phenotypes using computer programs (Giurumescu et al. 2009). These

developmental networks, however, are not based on the genome alone. Therefore, they do not fulfil Wolpert's hypothesis. Relevant studies on *Caenorhabditis elegans* in our topic of interest include predicting the effect of loss of function mutations at individual genes using gene networks (Lee et al. 2008). This is a first step in what, in more than 20 years, could lead to something similar to what Wolpert predicted, but with more limitations. Finding out the effects of these genes, however, is far different from finding out the results of the complete genome in the whole body when it interacts with the environment. Finding out the effect of a gene in a body is clearly different from trying to find out the whole-body structure itself from just the genome. Moreover, the phenotypic predictions in the paper of Lee et al. (2008) look only at the effects of mutations in genes, but not at all the other traits that are not influenced by genes alone, which are also part of Wolpert's prediction.

Nevertheless, if development cannot be predicted with certainty from the genome, there are plenty of traits, such as illnesses and Mendelian phenotypes, that can be predicted with great accuracy from it. Right now, the only thing we can do with most complex traits, such as diabetes mellitus 2 in humans, is to do genome-wide association studies in which certain haplotypes are linked to diseases (Scott et al. 2007). However, it would not be difficult to imagine that, in 20 years' time, we could know not just the single nucleotide polymorphisms associated with a disorder, but the actual alleles found in the quantitative trait loci that take place in the pathophysiological phenotype. This information is indeed stored in the genome and in the future, it could become known with the aid of molecular biology and bioinformatics. Studies in human variation would be highly useful for this as well. Because of new and more powerful sequencing techniques, it is likely that all the alleles within the quantitative trait loci for normal variation in humans or other economically important or model species could become known. This would allow phenotypic prediction to a limited but useful extent in medicine, agriculture, and biotechnology.

Conclusion

It is my view that Sheldrake will win the wager, as 20 years is not a very long time, when we take into account that significant scientific advancements often take a number of years. The scientific procedure involves long-lasting research projects. Once completed, the procedure needs to be submitted to a journal, peer reviewed, and perhaps rejected a few times before it is published. With that step, it will take more than 20 years' time to be able to do this. As far as our current knowledge of biology allows us to say, it is not possible to do what Wolpert predicts on a large scale, only in a limited fashion. This difficulty of course would not be proof of Sheldrake's claims of the existence of magic fields.

Acknowledgements: This work is dedicated to Enríquez, my wise teacher.

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CORRECTION

In 2009, when I wrote this dissertation, the fungal genus *Podospora* was included in the family Lasiosphaeraceae. Now it has been reclassified. Now it is included in the family Podosporaceae. It was reclassified by Wang et al. (2019) in their paper titled "Phylogenetic re-evaluation of *Thielavia* with the introduction of a new family Podosporaceae." It was published in "Studies in Mycology" 93: 155–252.

Peregrinus Hierusalemsis, June 2025

PEER-REVIEWED RESEARCH ARTICLE

Appendix H: A CHECKLIST OF NON-AVIAN DINOSAURS AND BIRDS (CLADE DINOSAURIA) SPECIES THAT ARE MENTIONED IN THIS BOOK, INCLUDING REFERENCES TO TYPE SPECIMENS AND THE DESIGNATION OF NEW TYPE SPECIMENS.

PEREGRINUS HIERUSALEMSIS

Abstract

271 species of dinosaurs are mentioned or illustrated in the 28 chapters and the eight appendices of this book. A list of these species was compiled. 24 of these species are currently extinct. The species listed belong to 97 families. One of the species, *Mantellisaurus atherfieldensis*, could not be assigned to any family because its evolutionary relationships are still unclear. All the species are listed with their nomenclatural types. The types of the following species were designated: I designated a lectotype for the Greylag Goose (***Anser anser* (Linnaeus)**) from Sweden. I designated a lectotype for the Whooper Swan (***Cygnus cygnus* (Linnaeus)**) from London, England, United Kingdom. I designated a lectotype for the Common Eider (***Somateria mollissima* (Linnaeus)**) from Sweden. I designated a lectotype for the Great Curassow (***Crax rubra* Linnaeus**) from the Pacific lowlands of northern South America. I designated a lectotype for the Willow Ptarmigan (***Lagopus lagopus* (Linnaeus)**) from Lapland, Sweden. I designated a lectotype for the Western Capercaillie (***Tetrao urogallus* Linnaeus**) from Sweden. I designated a lectotype for the American Flamingo (***Phoenicopterus ruber* Linnaeus**) from the Bahamas. I designated a lectotype for the Greater Flamingo (***Phoenicopterus roseus* Pallas**) from Montpellier, Hérault, Occitanie, France. I designated a lectotype for the Squirrel Cuckoo (***Piaya cayana* (Linnaeus)**) from Cayenne, French Guiana. I designated a lectotype for the Brown Pelican (***Pelecanus occidentalis* Linnaeus**) from the West Indies. I designated a lectotype for the White-tailed Eagle (***Haliaeetus albicilla* (Linnaeus)**) from Sweden. I designated a lectotype for the Great Horned Owl (***Bubo virginianus* (Gmelin)**) from Virginia, United States of America. I designated a lectotype for the Belted Kingfisher (***Megaceryle alcyon* (Linnaeus)**) from South Carolina, United States of America. I designated a lectotype for the Eurasian Wryneck (***Jynx torquilla* Linnaeus**) from Sweden. I designated a neotype for the Military Macaw (***Ara militaris* (Linnaeus)**) from Carraipía, La Guajira, Colombia. I designated a lectotype for the Red-billed Chough (***Pyrrhocorax pyrrhocorax* (Linnaeus)**) from Cornwall, England, United Kingdom. I designated a lectotype for the Hooded Crow (***Corvus cornix* Linnaeus**) from Sweden. I designated a lectotype for the Common Raven (***Corvus corax* Linnaeus**) from Sweden. I designated a lectotype for the Northern Mockingbird (***Mimus polyglottos* (Linnaeus)**) from Virginia, United States of America. I designated a lectotype for the Bluethroat (***Luscinia svecica* (Linnaeus)**) from Lapland, Sweden. I designated a lectotype for the Bohemian Waxwing (***Bombycilla garrulus* (Linnaeus)**) from Sweden. I designated a lectotype for the House Sparrow (***Passer***

Mantellisaurus atherfieldensis **(Hooley, 1925) (Ornithopoda: Incertae Sedis)**

Illustration made by Alaitz (Anima Eterna). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 868.**

domesticus* (Linnaeus)**) from Sweden. I designated a lectotype for the Snow Bunting (Plectrophenax nivalis* (Linnaeus)**) from Lapland. I designated a lectotype for the Brown-headed Cowbird (***Molothrus ater* (Boddaert)**) from South Carolina, United States of America. I designated a lectotype for the Northern Cardinal (***Cardinalis cardinalis* (Linnaeus)**) from South Carolina, United States of America. I designated a lectotype for the Indigo Bunting (***Passerina cyanea* (Linnaeus)**) from South Carolina, United states of America. I designated a lectotype for the Painted Bunting (***Passerina ciris* (Linnaeus)**) from South Carolina, United States of America.

ISBN 979-8-89283-269-4

ZooBank LSID: urn:lsid:zoobank.org:pub:D0175613-7A77-4DB2-913B-43BD737932D2

This book was simultaneously published as a hardcover and as an online PDF/A. New Scientific names fulfill the ICZN requirements for both printed books and electronic documents.

Citation: Hierusalemsis P (2025*)* A checklist of non-avian dinosaurs and birds (Clade Dinosauria) species that are mentioned in this book, including references to type specimens and the designation of new type specimens. In: P. Hierusalemsis (ed.), *The Princess of the Wraiths: an herbal, bestiary, human zoo, and memoir.* Miami: Books to Hook Publishing, LLC. pp. 758–829.

Published: Saturday the 21st of June 2025 Anno Domini

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Data Availability: No datasets were generated or analyzed during the current study. All relevant data from this study is hereby being made available.

Competing interests: The author declares that no competing interests exist.

Systematics

Animalia Linnaeus, 1758

ParaHoxozoa Ryan et al., 2010

Bilateria Hatschek, 1888

Deuterostomia Grobben, 1908

Chordata Haeckel, 1874

Olfactores Jefferies, 1991

Vertebrata Lamarck, 1801

Gnathostomata Gegenbaur, 1874

Eugnathostomata Robertson, 1970

Osteichthyes Huxley, 1880

Sarcopterygii Romer, 1955

Rhipidistia Cope, 1887

Tetrapodomorpha Ahlberg, 1991

Eotetrapodiformes Cotes & Friedman, 2010

Elpistostegalia Camp & Allison, 1961

Stegocephalia Cope, 1868

Tetrapoda Hatschek & Cori, 1896

Reptilomorpha Säve-Söderbergh, 1934

Amniota Haeckel, 1886

Reptilia Laurenti, 1768

Eureptilia Olson, 1947

Romeriida Gauthier et al., 1988

Diapsida Osborn, 1903

Neodiapsida Benton, 1985

Sauria McCartney, 1802

Archelosauria Crawford et al. 2015

Archosauromorpha Von Huene, 1946

Crocopoda Ezcurra, 2016

Archosauriformes Gauthier, 1986

Eucrocopoda Ezcurra, 2016

Archosauria Cope, 1869

Avemetatarsalia Benton, 1999

Ornithodira Gauthier, 1986

Dinosauromorpha Benton 1985

Dinosauriformes Novas, 1992

Dinosauria Owen, 1842

List of species

1. ***Stegosaurus ungulatus*** **Marsh, 1879 (Stegosauria Marsh, 1877a: Stegosauridae Marsh, 1880)** **HOLOTYPE:** Kimmeridgian/Tithonian wet floodplain claystone from Morrison Formation. Skeleton from Quarry 12, Como Bluff (YPM), 41.9° N, 106.1° W, Carbon County, Wyoming, United States of America, *W. Reed & A. Lakes* ***YPM VP*** *001853* (Peabody Museum of Natural History, Yale University, New Haven, Connecticut, United States of America). **My comments:** This species is extinct. It lived during the late Jurassic.
2. ***Pachycephalosaurus wyomingensis*** **(Gilmore, 1931) (Pachycephalosauria Maryańska & Osmólska, 1974: Pachycephalosauridae Sternberg, 1945) Protonym:** *Troödon wyomingensis* Gilmore, 1931. **HOLOTYPE:** Maastrichtian from Lance Formation. Anterior part of skull from 9 mi SW from Warren Post Office, 43.2° N, 104.6° W, Niobrara County, Wyoming, United States of America, *G. F. Sternberg* ***USNM PAL*** *12031* (Smithsonian National Museum of Natural History, Washington DC, United States of America). *Tylosteus ornatus* Leidy was described before *Pachycephalosaurus wyomingensis*. This fossil seems to belong to the same species as *Dracorex hogwartsia* Bakker et al. according to Sullivan (2006) in "New Mexico Museum of Natural History and Science Bulletin" 35: 347–366. It is likely that *Dracorex hogwartsia* was an immature *Pachycephalosaurus wyomingensis* according to Stokstad (2007) in "Science" 318(5854): 1236. This would mean that *Pachycephalosaurus wyomingensis* would be a junior synonym of *Tylosteus ornatus*. The fact that *Pachycephalosaurus wyomingensis* could be the same species as *Tylosteus ornatus* has been suspected even before *Dracorex hogwartsia* was unearthed. That is why the ICZN (1986) conserved the genus *Pachycephalosaurus* Brown & Schlaikjer against *Tylosteus* Leidy in opinion 1371 that was published in "The Bulletin of Zoological Nomenclature" 43(1): 19–20. However, I have not listed *Pachycephalosaurus wyomingensis* as a conserved name as this would imply that *Pachycephalosaurus wyomingensis* and *Dracorex hogwartsia* are the same species. I am uncertain about this. I personally would prefer that *Dracorex hogwartsia* was a synonym of *Pachycephalosaurus wyomingensis*, as its name is so tacky. **My comments:** This species is extinct. It lived during the late Cretaceous.
3. ***Triceratops prorsus*** **Marsh, 1890a (Ceratopsia Marsh, 1890b: Ceratopsidae Marsh, 1888) HOLOTYPE:** Maastrichtian terrestrial sandstone from Laramie Formation. Skull from Middle Fork, Dry Creek, 43.1° N, 104.6° W, Niobrara County, Wyoming, United States of America, *J. B. Hatcher* ***YPM VP*** *001822* (Peabody Museum of Natural History, Yale University, New Haven, Connecticut, United States of America). **My comments:** This species is extinct. It lived during the late Cretaceous.
4. ***Tenontosaurus tilletti*** **Ostrom, 1970 (Ornithopoda Marsh, 1881: Tenontosauridae Norman, 1998)** **HOLOTYPE:** Albian claystone from Cloverly Formation. Partial skeleton from Middle Dome, 12 mi SE of Harlowtown, 46.3° N, 109.7° W, Wheatland County, Montana, United States of America, *B.*

Brown ***AMNH FR*** *3040* (American Museum of Natural History, New York City, New York, United States of America). The family of this species was originally described as the subfamily Tenontosaurinae Norman. This description can be read in the work by Norman (1998) in "Zoological Journal of the Linnean Society" 122: 291–348. Following the principle of coordination of article 36 of the ICZN, this is a valid description for the family Tenontosauridae Norman. I believe clade Tenontosauridae needs to be considered as a family. This is also the opinion of Tracy Lee Ford in Paleofile.com. Traditionally, this clade was thought to be part of family Hypsilophodontidae Dollo, as can be read in the work by Olshevsky (1991) in "Mesozoic Meanderings #2." However, if family Hypsilophodontidae was monophyletic and it would include clade Tenontosauridae, then all the members of clade Iguanodontia Baur would belong to family Hypsilophodontidae, as the clade containing *Hypsilophodon foxii* Huxley is the sister clade to Tenontosauridae and all the other members of Iguanodontia. A phylogeny of Clypeodonta Norman that shows this can be seen in the work of Poole (2022) in "Palaeontologia Electronica" 25(3): a30. **My comments:** This species is extinct. It lived during the early Cretaceous.

5. Mantellisaurus atherfieldensis **(Hooley, 1925) (Ornithopoda: incertae sedis)**

Protonym: *Iguanodon atherfieldensis* Hooley, 1925. **HOLOTYPE:** Valangian/Barremian from Wessex Formation. Skeleton from cliff close to Atherfield Point, 50.6° N, 1.4° W, Brightstone Bay, Isle of Wight, England, United Kingdom, *R. W. Hooley* ***BMNH PV R*** *5764* ***PAL NHMUK:ecatalogue:*** *2140286* ***barcode:*** *010025176* (Natural History Museum, London, England, United Kingdom). This species has traditionally been placed in the family Iguanodontidae Bonaparte. This is according to Norman (2014) in "Hadrosaurs" 10–43. However, in some studies, this family is paraphyletic as traditionally defined, as it includes among its clades the family Hadrosauridae Cope. This is according to the phylogeny of McDonald (2012) in "PLoS One" 7(5): e36745. According to this hypothesis *Mantellisaurus* would not belong to the monophyletic clade Iguanodontidae. As there is not yet a consensus of its evolutionary relationships, I have not assigned it to a family. I am hesitant to either including it in Iguanodontidae or describing a new family for it. **My comments:** This species is extinct. It lived during the early Cretaceous. In 1843, a famous dinosaur fossil skeleton was found in Maidstone, England, United Kingdom. Gideon Mantell referred to it as *Iguanodon* Mantell. He wrongly reconstructed it as a creature that looked a bit like the iguanas that belong to the species *Cyclura cornuta* (Bonnaterre). Mantell infamously placed the thumb spike on the snout of his reconstruction. Mantell showed his illustrated reconstruction in his book titled "The Wonders of Geology; or, a familiar exposition of geological phenomena" (volume 1, 1838). The Maidstone fossil belonged to the species *Mantellisaurus atherfieldensis*. This was shown by Norman (2013) in his paper published in the "Revue de Paléobiologie, Genève" 32(2): 385–404. You can see a depiction of Mantell's reconstruction on **page 759** of this book that you are now reading.

***6.Parasaurolophus walkeri* Parks, 1922 (Ornithopoda: Hadrosauridae Cope, 1869) HOLOTYPE:** Campanian channel lag sandstone from Dinosaur Park Formation. Partial skeleton from RTMP Quarry 12, Sand Creek, 50.8° N, 111.5° W, Dinosaur Provincial Park, County of Newell, Alberta, Canada, *L. W. Dippell & L. Sternberg* ***ROM** 768* (Royal Ontario Museum, Toronto, Ontario, Canada). **My comments:** This species is extinct. It lived during the late Cretaceous.

***7.Latirhinus uitstlani* Prieto-Márquez & Serrano Brañas, 2012 (Ornithopoda: Hadrosauridae) LECTOTYPE:** Designated by A. A. Ramírez-Velasco et al. (2021) in "Journal of South American Earth Sciences" 110: 103391. Campanian from Cerro del Pueblo Formation. Pectoral apendicular bones and pelvic bones from Ejido Presa de San Antonio, 25.4° N, 101.8° W, Parras de la Fuente, Coahuila, México, *L. Espinosa Arrubarrena* ***IGM** 6583* (Colección Nacional de Paleontología, Instituto de Geología, Universidad Nacional Autónoma de México, Ciudad de México, Mexico). This skeleton is known as "Isauria." There are plenty of castings of it in museums of Mexico. Unfortunately, in most of these reproductions, their skulls look like the skull of a *Gryposaurus notabilis* Lambe, so they are not reliable. **My comments:** This species is extinct. It lived during the late Cretaceous.

***8.Apatosaurus louisae* Holland, 1916 (Sauropodomorpha Von Huene, 1932: Diplodocidae Marsh, 1884) HOLOTYPE:** Tithonian coarse channel fill sandstone from Morrison Formation. Skeleton from Dinosaur National Monument Quarry, 40.4° N, 109.3° W, Uintah County, Utah, United States of America, *E. Douglass, C. Gilmore & F. Pack* ***CM** 3018* (Carnegie Museum of Natural History, Pittsburg, Pennsylvania, United States of America).

***9.Diplodocus carnegii* Hatcher, 1901 (Sauropodomorpha: Diplodocidae) HOLOTYPE:** Kimmeridgian/Tithonian lacustrine horizon from Morrison Formation. Skeleton from Carnegie Quarry D(3), Sheep Creek, 42.2° N, 105.9° W, Albany County, Wyoming, United States of America, *J. L. Wortman, A., W. H. Reed, O. A. Peterson, A. Coggeshall, & C. Gilmore* ***CM** 84.* (Carnegie Museum of Natural History, Pittsburgh, Pennsylvania, United States of America). This fossil skeleton is included with another fossils in a mounted skeleton that is nicknamed with the cheesy name of "Dippy." There are nine casts that are copies of "Dippy." These are found in the United Kingdom, France, Italy, Germany, Austria, Spain, Russia, Argentina, and Mexico. The *Diplodocus carnegii* in the Museo del Chopo that was later exhibited at the Museo de Historia Natural de la Ciudad de México is one of such casts. **My comments:** This species is extinct. It lived during the late Jurassic.

***10.Dilophosaurus wetherilli* (Welles, 1954) (Theropoda Marsh, 1881: Dilophosauridae Charig & Milner, 1990) Protonym:** *Megalosaurus wetherilli* Welles, 1954. **HOLOTYPE:** Sinemurina/Pliensbachian shale/siltstone from Kayenta Formation. Skeleton from UCMP V4214, Moa Ave I, 36.1° N, 110.3° W, Coconino County, Arizona, United States of America, *J. Williams & S. P. Welles* ***UCMP** 37302* (University of California Museum of Paleontology, University of California Berkeley, Berkeley, California, United States of America). **My**

comments: This species is extinct. It lived during the early Jurassic.

11. ***Allosaurus fragilis*** **Marsh, 1877b (Theropoda: Allosauridae Marsh, 1878) HOLOTYPE:** Kimmeridgian/Tithonian channel sandstone/claystone from Morrison Formation. Partial skeleton from Felch Quarry 1, Garden Park, 38.5° N, 105.2° W, Fremont County, Colorado, United States of America, *H. Felch, J. B. Hatcher & W. Utterback* ***YPM*** *1930* (Peabody Museum of Natural History, Yale University, New Haven, Connecticut, United States of America). **My comments:** This species is extinct. It lived during the late Jurassic.

12. ***Tyrannosaurus rex*** **Osborn, 1905 (Theropoda: Tyrannosauridae Osborn, 1906) HOLOTYPE:** Maastrichtian sandstone from Lance Formation. Skeleton from Sheba Mountain, Sieber Ranch, 48.3° N, 105.8° W, Dawson County, Montana, United States of America, *B. Brown* ***CM*** *9380* (Carnegie Museum of Natural History, Pttsburgh, Pennsylvania, United States of America). **My comments:** This species is extinct. It lived during the late Cretaceous.

13. ***Deinonychus antirrhopus*** **Ostrom, 1969 (Theropoda: Dromaeosauridae Colbert & Russell, 1969) HOLOTYPE:** Albian fluvial/lacustrine claystone from Cloverly Formation. Left foot from Edwards Ranch, 45.2° N, 108.8° W, Bridger, Carbon County, Montana, United States of America *J. H. Ostrom* ***YPM*** *5205* (Peabody Museum of Natural History, Yale University, New Haven, Connecticut, United States of America). **My comments:** This species is extinct. It lived during the early Cretaceous.

14. ***Stenonychosaurus inequalis*** **Sternberg, 1932 (Theropoda: Troodontidae Gilmore, 1924) HOLOTYPE:** Campanian from Dinosaur Park Formation. Partial skeleton from 1.5 mi SW of mouth, Berry Creek, 50.8° N, 111.6° W, Dinosaur Provincial Park, County of Newell, Alberta, Canada, *C. M. Sternberg* ***CMN*** *8539* (Canadian Museum of Nature, Ottawa, Ontario, Canada). **My comments:** This species is extinct. It lived during the late Cretaceous.

15. ***Struthio camelus*** **Linnaeus, 1758 (Theropoda: Struthioniformes Latham, 1790b: Struthionidae Vigors, 1825) My comments:** In ancient Egyptian culture, the atef crown was the crown of King Osiris the Khenti-Amentiu. This can be read in the ancient Egyptian magical spell known as "Coffin Text 313." It is transcribed in the work by De Buck (1951) in "The University of Chicago Oriental Institute Publications" 67: 1–413. The atef had two *Struthio camelus* feathers. This is known because its hieroglyph looks exactly the same as the atef crown is depicted in ancient Egyptian art: . Thus, you can identify the crown that this hieroglyph refers to. You can see this crown depicted on **page 847.** The bird that is wearing the atef crown is not a *Struthio camelus*. It is the mythical Phoenix (also known as Bennu). Before his resurrection, Osiris is compared to the Phoenix in Chapter 17 of the famous "Book of the Dead."

16. ***Dinornis robustus*** **Owen, 1846 (Theropoda: Dinornithiformes Gadow, 1893: Dinornithidae Bonaparte, 1853) Protonym:** *Dinornis ingens* var. *robustus* Owen, 1846. **LECTOTYPE:** Designated by Archey (1941) in "Bulletin of the Auckland Institute and Museum" 1: 1–119. It is a

metatarsus from Waikouaiti, Otago, South Island, New Zealand. (Hunterian Museum, Royal College of Surgeons, London, England, United Kingdom). The only specimens of the families Dinornithidae Owen and Emeidae Bonaparte currently housed in the Hunterian Museum are a cast of a cranial cavity of a *Dinornis* Owen, and a skeleton of an *Anomalopteryx didiformis* (Owen). So, the lectotype is lost. **My comments:** This species is extinct. It became extinct between the 14th and 15th centuries.

17. ***Megalapteryx didinus*** **(Owen, 1883) (Theropoda: Dinornithiformes: Megalapterygidae Bunce et al. 2009) Protonym:** *Dinornis didinus* Owen, 1883. **HOLOTYPE:** Mummified head, neck, and feet of an adult from a cave near Queenstown in Crown Range, Otago, South Island, New Zealand, *M. Squires* ***BMNH PV A*** *16* ***PAL NHMUK:ecatalogue:****5739984* (The Natural History Museum London, London, England, United Kingdom). **My comments:** This species is extinct. It became extinct at the end of the 15th century.

18. ***Casuarius casuarius*** **(Linnaeus, 1758) (Theropoda: Casuariiformes Sclater, 1880: Casuariidae Kaup, 1847) Protonym:** *Struthio Casuarius* Linnaeus, 1758.

19. ***Dromaius novaehollandiae*** **(Latham, 1790b) (Theropoda: Casuariiformes: Casuariidae) Protonym:** *Casuarius N. Hollandiae* Latham, 1790b.

20. ***Apteryx australis*** **Shaw, 1813 (Theropoda: Apterygifomes Haeckel, 1866: Apterygidae Gray, 1840) HOLOTYPE:** An adult individual from South Cape, Stewart Island, New Zealand, *A. Barclay* ***LIV D****180* (Liverpool World Museum, Liverpool, England, United Kingdom). The locality of the holotype was found by sequencing its nuclear single nucleotide polymorphisms (SNPs) and part of its mitochondrial genome. Then these data were compared with the same data from known populations of birds. This was published by Scofield et al. 2021 in "Conservation Genetics" 22(4): 645–652.

21. ***Apteryx owenii*** **Gould, 1847 (Theropoda: Apterygifomes: Apterygidae) HOLOTYPE:** An adult from New Zealand (Museum of the Zoological Society of London, London, England United Kingdom). This museum was dissolved in 1854 according to Wheeler (1997) in "Archives of Natural History" 24(1): 89–126. Lectotype locality is the north of South Island according to Oliver (1955) in "New Zealand Birds," second edition.

22. ***Aepyornis maximus*** **Geoffroy Saint-Hilaire, 1851 (Aepyornithiformes Newton, 1884: Aepyornithidae Bonaparte, 1853) LECTOTYPE:** Designated by Hansford & Turvey (2018) in "Royal Society Open Science" 5(9): 181295. It is a tarsometatarsus from the south coast of Madagascar, *M. Abadie* (Muséum National d'Histoire Naturelle, Paris, Île-de-France, France) This specimen may be lost, but you can look at it in illustration VIII of the work by Bianconi (1865) published in "Memorie della Reale Accademia dell'Istituto di Bologna, Classe di Scienz" ser.2: t.5 63–140. **My comments:** This species is extinct. It became extinct during the Middle Ages.

23. ***Diatryma gigantea*** **Cope, 1876 (Theropoda: Gastornithiformes Stejneger, 1885a: Gastornithidae**

Fürbringer, 1888) HOLOTYPE: A left proximal tarsometatarsus, and a distal right partial tarsometatarsus. Wasatchian from New Mexico, United States of America, *E. D. Cope* ***USNM*** *V1120* (Smithsonian National Museum of Natural History, Washington DC, United States of America). The holotype is cited and illustrated by Cope (1877) in the "Report upon United States Geographical Surveys west of the one hundredth meridian" 70, pl.32, f.23–25. **My comments:** This species is extinct. It lived during the late Paleocene and Eocene.

24. Chauna torquata **(Oken, 1816) (Theropoda: Anseriformes Wagler, 1831: Anhimidae Stejneger, 1885b) Protonym:** *Chaja torquata* Oken, 1816.

25. Dendrocygna bicolor **(Vieillot, 1816d) (Theropoda: Anseriformes: Anatidae Leach, 1820) Protonym:** *Anas bicolor* Vieillot, 1816d.

26. Anser anser **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas Anser* Linnaeus, 1758. Among the syntypes included by Linnaeus in his original description there are wild *Anser anser*. There are domestic *Anser anser*. There is also a wild *Anser albifrons* (Scopoli). This last individual from Hudson Bay, Canada is cited from illustration 153 of the book by Edwards (1750) that is titled: "A Natural History of Birds, the most of which have not hitherto been figured or described, and the rest, by reason of obscure, or too brief descriptions, without figures, or of figures very ill defign'd, are hitherto but little known." This means that not all the syntypes of the original description of *Anser anser* belong to *Anser anser* as we currently define it. This requires the selection of a lectotype for this species. This is not a mere curatorial exercise as I want to maintain taxonomic stability. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Anas Anser* Linnaeus the specimen depicted in the illustration by Rudbeck Jr. in his "Portföljen" that is titled: "Wild-gås." Number "21." is written in the right-hand corner. The lectotype locality of *Anser anser* is Sweden. "Fogelboken, portföljen" *O. Rudbeck Jr.* ***förvaring i KoB, E*** *32b* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

27. Anser cygnoides **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas Cygnoid* Linnaeus, 1758.

28. Branta leucopsis **(Bechstein, 1803) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas leucopsis* Bechstein, 1803. **My comments:** This species is not mentioned in this book. However, it is depicted in the illustration of the barnacle

tree (**page 875**). Medieval Catholic priest Gerald of Wales wrote in his book "Topographia Hibernica" that there is an Irish legend that states that trees that belong to the species *Pinus sylvestris* Linnaeus throw resin to the sea. This resin gets attached to floating timber where due to spontaneous generation becomes a barnacle that belongs to the species *Lepas anatifera* Linnaeus. This crustacean undergoes metamorphosis and becomes a goose that belongs to the genus *Branta* Scopoli. In a later version told by Pope Pius II (1458) in a book titled "De Europa" there is a species of Scottish tree that presumably appears by spontaneous generation that produces fruits that are *Lepas anatifera*. When these creatures undergo metamorphosis, they become *Branta* geese. Holy Roman Emperor Frederick II in his book "De Arte Venandi cum Avibus" states that he dissected many *Lepas anatifera*, and he did not find any evidence that there were any bird embryos inside of them. He thinks the myth of the barnacle tree is the result of migratory species of geese that have breeding sites that are in extremely distant lands. As people do not see any nests, eggs, or chicks nearby, they imagine these birds are born due to spontaneous generation. The description that Emperor Frederick II provides shows that the geese belonged to the species *Branta leucopsis*.

29. ***Branta canadensis*** **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae)**
Protonym: *Anas canadensis* Linnaeus, 1758.

30. ***Cygnus olor*** **(Gmelin, 1789) (Theropoda: Anseriformes: Anatidae)**
Protonym: *Anas Olor* Gmelin, 1789.

31. ***Cygnus cygnus*** **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae)**
Protonym: *Anas Cygnus* Linnaeus, 1758. Linnaeus does not restrict the species *Cygnus cygnus* as we now do. In his original description, he includes specimens of what we now consider as three different species. These species are *Cygnus olor* (Gmelin), *Cygnus columbianus* (Ord) and *Cygnus cygnus*. An example of a *Cygnus olor* among Linnaeus's series of specimens is the bird depicted in the illustration titled: "the female swan" in the work of Albin (1738) that is titled "A Natural History of Birds illustrated with a hundred and one copper plates, engraven from the life" volume 3. An example of a *Cygnus columbianus* among Linnaeus's series of specimens is the bird described in "Fauna Svecica" (1746), as Linnaeus states in his preface of such book that he based his knowledge of birds on the illustrations by Olof Rudbeck the younger. The species of *Cygnus* De Garsault in the illustration of the "Portföljen" of Rudbeck Jr. is a *Cygnus columbianus*. An example of a *Cygnus cygnus* among Linnaeus's series of specimens is the head of the bird on the illustration titled: "Cygni feri caput. An Elk's head" in the work of Ray (1678) that is titled: "The ornithology of Francis Willughby of Middleton in the county of Warwick, esq." To restrict the name *Cygnus cygnus* to the current delimitation I shall designate a lectotype. This is not a mere curatorial exercise as I want to maintain taxonomic stability. I hereby designate as **LECTOTYPE** of *Anas Cygnus* Linnaeus, the adult individual whose full body image is depicted in the illustration titled "The wild swan published Septem. 1743 by G. E. Edwards." This image is illustration 150 in the book by Edwards (1750) that is titled: "A Natural History of Birds, the most of which have not hitherto been figured or

described, and the rest, by reason of obscure, or too brief descriptions, without figures, or of figures very ill defign'd, are hitherto but little known." The text of such book indicates that the author obtained this specimen in London, England, United Kingdom. That is thus the lectotype locality. I was unable to designate a Swedish lectotype for this species, as the only individual with a certain species identity in "Fauna Svecica" and "Iter Westrogothiae" (1747) is a *Cygnus columbianus* and not a *Cygnus cygnus*. (See the specimen in the "Portföljën"). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

32. ***Coscoroba coscoroba*** **(Molina, 1782) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas Coscoroba* Molina, 1782.
33. ***Alopochen aegyptiaca*** **(Linnaeus, 1766) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas aegyptiaca* Linnaeus, 1766.
34. ***Tadorna tadorna*** **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas Tadorna* Linnaeus, 1758.
35. ***Cairina moschata*** **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas moschata* Linnaeus, 1758.
36. ***Aix sponsa*** **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas Sponsa* Linnaeus, 1758.
37. ***Hymenolaimus malacorhynchos*** **(Gmelin, 1789) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas malacorhynchos* Gmelin, 1789.
38. ***Spatula clypeata*** **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas clypeata* Linnaeus, 1758.
39. ***Mareca americana*** **(Gmelin, 1789) (Theropoda: Anseriformes: Anatidae) Protonym:** *Anas americana* Gmelin, 1789.
40. ***Anas platyrhynchos*** **Linnaeus, 1758 (Theropoda: Anseriformes: Anatidae)**
41. ***Anas diazi*** **Ridgway, 1886 (Theropoda: Anseriformes: Anatidae) SYNTYPES:** Laguna del Rosario, Tlaxcala, Mexico *F. Ferrari-Perez*; San Ysidro, Puebla, Mexico *F. Ferrari-Pérez* (Museo Nacional de México, Ciudad de México, Mexico). The collections of the Museo Nacional de México were transferred to the Museo del Chopo. From there, they were transferred to the Museo de Historia Natural de la Ciudad de México and to the Instituto de Biología de la Universidad Nacional Autónoma de México. However, I was not able to find these specimens.
42. ***Anas acuta*** **Linnaeus, 1758 (Theropoda: Anseriformes: Anatidae)**
43. ***Anas chlorotis*** **Gray, 1845 (Theropoda: Anseriformes: Anatidae) SYNTYPES:** On the banks of a freshwater stream of New Zealand. Adult female *P. Earl* ***BMNH*** *1845.1.13.20* ***ZOO NHMUK:ecatalogue:****2288800* ***barcode:*** *012300863* Adult female *P. Earl* ***BMNH*** *1845.1.13.20* ***ZOO NHMUK:ecatalogue:****3423451* ***barcode:*** *012409440* Immature male *P. Earl* ***BMNH*** *1845.1.13.22* ***ZOO NHMUK:ecatalogue:****3423457* ***barcode:***

012409438 Immature male *P. Earl* ***BMNH*** *1845.1.13.22* ***ZOO NHMUK:ecatalogue:****2288803* ***barcode:*** *012300864* Adult male *P. Earl* ***BMNH*** *1845.1.13.21* ***ZOO NHMUK:ecatalogue:****3423454* ***barcode:*** *011966897* (Natural History Museum at Tring, Tring, England, United Kingdom).

44. Polysticta stelleri **(Pallas, 1769) (Theropoda: Anseriformes: Anatidae)**
Protonym: *Anas Stelleri* Pallas, 1769.

45. Somateria spectabilis **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae)**
Protonym: *Anas spectabilis* Linnaeus, 1758. You can see a depiction of two individuals of this species on **page 537.**

46. Somateria mollissima **(Linnaeus, 1758) (Theropoda: Anseriformes: Anatidae)**
Protonym: *Anas mollissima* Linnaeus, 1758. In the original description, Linnaeus cites specimens that are now considered to belong to different subspecies. He cites a specimen of the subspecies that we now know as *Somateria mollissima faeroeensis* Brehm from the Faeroe Islands in the work by Worm (1655) that is titled "Museum Wormianum." Linnaeus also cites among his series of syntypes some specimens from Greenland in the natural history cabinet of Hans Solane that belong to the subspecies that we now know as *Somateria mollissima borealis* (Brehm). These specimens are described in the book by Edwards (1743) that is titled: "A natural history of uncommon birds: and of some other rare and undescribed animals, quadrupedes, fishes, reptiles, insects, &c., exhibited in two hundred and ten copper-plates, from designs copied immediately from nature, and curiously coloured after life." All the other specimens in the series of syntypes of Linnaeus belong to the subspecies that we now know as *Somateria mollissima mollissima* Linnaeus. To restrict this name to the subspecies that we now know as *Somateria mollissima mollissima* I shall designate a lectotype. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Anas mollissima* Linnaeus the adult male specimen depicted in the illustration by Rudbeck Jr. in his "Fogelboken" that is titled: "Eider, anas plumis mollissimis mas" and that has the number "261." written in the right-hand corner. The lectotype locality is Sweden. "Fogelboken" *O. Rudbeck Jr.* ***Shelfmark: Leufsta MS*** *91* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

47. Oxyura jamaicensis **(Gmelin, 1789) (Theropoda: Anseriformes: Anatidae)**
Protonym: *Anas jamaicensis* Gmelin, 1789

48. ***Sylviornis neocaledoniae*** **Poplin, 1980 (Theropoda: Galliformes Temminck, 1820: Sylviornithidae Mourer-Chauviré & Balouet, 2005) HOLOTYPE:** Toe bone embedded in matrix. Kanumera, Île des Pins, New Caledonia, *M-J Dubois n°1976-241*, Laboratory of Comparative Anatomy (Muséum National d'Histoire Naturelle, Paris, Île-de-France, France). **My comments:** This species is extinct. It became extinct between the 13th and the 9th centuries BCE.

49. ***Penelope purpurascens*** **Wagler, 1830a (Theropoda: Galliformes: Cracidae Rafinesque, 1815) HOLOTYPE:** Adult male (Zoologische Staatssammlung München, Munich, Bavaria, Germany). Holotype locality is Mexico.

50. ***Mitu tuberosum*** **(Von Spix, 1825) (Theropoda: Galliformes: Cracidae) Protonym:** *Crax tuberosa* Von Spix, 1825. **SYNTYPE:** Adult individual from the tropical rainforest close to Río Solimões, Amazonas, Brazil, *J. B. Von Spix* (Zoologische Staatssammlung München, Munich, Bavaria, Germany). According to Hellmayr, there is another individual, apparently collected by Von Spix, that is also labeled as belonging to the same species. However, it does not agree with Von Spix's description. It does not look like the birds currently agreed to belong to this species either. Hellmayr (1906) stated this in "Abhandlungen der Mathematisch-Physikalischen Klasse der Königlich Bayerischen Akademie der Wissenschaften" 22: 561–726. **My comments:** This species is not mentioned in the text of this book. However, a feather of a bird of this species is shown as the fletching of the arrow of a young woman that is illustrated as the allegory of the Americas (see **page 55**). Some Indigenous Peoples from South America use feathers of this species as the fletching of their arrows. This can be read in a paper by González-Ruibal et al. (2011) that was published in the "Journal of Anthropological Archaeology" 30(1): 1–16. The allegory of the Americas must be an Indigenous woman with a bow and arrows. This is explained by Ripa in his "Iconologia" (second edition, 1603).

51. ***Crax rubra*** **Linnaeus, 1758 (Theropoda: Galliformes: Cracidae).** In the original description, Linnaeus states that this species lives in the New World. There are two subspecies of this species. The nominate subspecies *Crax rubra rubra* Linnaeus lives in the mainland. *Crax rubra griscomi* Nelson is found in Cozumel Island, Mexico. As Linnaeus did not define a type locality, I shall designate a lectotype to restrict the name *Crax rubra rubra* to the mainland populations. This is not a mere curatorial exercise as I want to maintain taxonomic stability. This will provide nomenclature stability. Linnaeus based his description on the testimony of Eleazar Albin. Albin stated that he did not know the name of the species. However, he knew it came from Peru, so he referred to it as the "red Peruvian hen." He saw such a bird alive in Richmond Palace, London, England. He said such a bird belonged to Lady Caroline Brandenburg-Ansbach when she was the princess of Wales. This means she was already married to George Augustus Brunswick-Lüneburg, but she was not yet the queen of the United Kingdom, as his husband was not yet crowned, as king George II, at that time. I know this because the title of princess of Wales was given to her when she married. She remained having

such a title until she was crowned queen of the United Kingdom. This means that the bird that Eleazar Albin studied lived in Richmond Palace between the years 1705 and 1727. During that span of time, except the years 1717–1723, the Viceroyalty of Peru included the countries that we now know as Colombia and Ecuador. So, Peru at that time was not just the region that we now know as Peru but included more lands. This means that the pet of princess Caroline arrived in London from the Pacific lowlands of what is now Colombia or Ecuador. Therefore, I hereby designate as **LECTOTYPE** of *Crax rubra* Linnaeus the female individual that is labeled as the "red Peruvian hen" on plate 40 of the book by Albin (1738) that is titled "A Natural History of Birds illustrated with a hundred and one copper plates, engraven from the life" vol. 3. The lectotype locality is the Pacific lowlands of northern South America. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

52. ***Callipepla douglasii*** **(Vigors, 1829) (Theropoda: Galliformes: Odontophoridae Gould, 1844) Protonym:** *Ortyx douglasii* Vigors, 1829. **HOLOTYPE:** Adult, *F. W. Beechey* ***BMNH*** *1855.12.19.378* ***ZOO NHMUK:ecatalogue:*** *3424006* ***barcode:*** *012270214* (Natural History Museum at Tring, Tring, England, United Kingdom). The holotype locality is Mazatlán, Sinaloa, Mexico, according to Gambel (1848) in "Journal of the Academy of Natural Sciences of Philadelphia" 1: 215–229.

53. ***Cyrtonyx montezumae*** **(Vigors, 1830) (Theropoda: Galliformes: Odontophoridae) Protonym:** *Ortyx Montezumae* Vigors, 1830. **HOLOTYPE:** Adult male from Mexico, ***BMNH*** *1881.2.18.78* ***ZOO NHMUK:ecatalogue:*** *2288702* ***barcode:*** *011967819* (Natural History Museum at Tring, Tring, England, United Kingdom).

54. ***Dactylortyx thoracicus*** **(Gambel, 1848) (Theropoda: Galliformes: Odontophoridae) Protonym:** *Ortyx thoracicus* Gambel, 1848. **HOLOTYPE:** Xalapa, Veracruz, Mexico, *R. Montes de Oca* ***ANSP*** *12405* (Academy of Natural Sciences of Drexel University, Philadelphia, Pennsylvania, United States of America)

55. ***Meleagris gallopavo*** **Linnaeus, 1758 (Theropoda: Galliformes: Phasianidae Horsfield, 1821)**

56. ***Meleagris ocellata*** **Cuvier, 1820 (Theropoda: Galliformes: Phasianidae) SYNTYPES:** Three adult individuals from Campeche, Bay of Honduras (This is now Campeche, Mexico) (Muséum National d'Histoire Naturelle, Paris, Île-de-France, France) These specimens may be lost.

57. ***Lagopus leucura*** **(Richardson, 1831) (Theropoda: Galliformes: Phasianidae) Protonym:** *Tetrao* (*Lagopus*) *leucurus* Richardson, 1831. **HOLOTYPE:** Adult from the Rocky Mountains *Drummond* ***Z.****1926.109.118* **PARATYPES:** Adult from the Rocky Mountains *Drummond* ***Z.****1926.109.119* (National Museums

Scotland, Edinburgh, Scotland, United Kingdom). Adult from the Rocky Mountains *Drummond* ***UMZC*** *14/Tet/6/b/1* (Cambridge University Museum of Zoology, Cambridge, England, United Kingdom)

58. Lagopus lagopus **(Linnaeus, 1758) (Theropoda: Galliformes: Phasianidae)**

Protonym: *Tetrao Lagopus* Linnaeus, 1758.

In the syntype series of the original description by Lnnaeus there are some northern European birds that belong to the species that we now know as *L. lagopus* and birds from the Alps that belong to the species that we now know as *Lagopus muta* Montin (i.e., the birds in the works by Gesner and Aldrovandi). Therefore, to maintain taxonomic stability, I shall designate a lectotype for *L. lagopus*. Hartert (1922) restricted the type locality to Swedish Lapland in "Die Vögel der paläarktischen Fauna systematische Übersicht der in Europa, Nord-Asien und der Mittelmeerregion vorkommenden Vögel" volume 3. To maintain nomenclatural stability, I have chosen a type specimen from Lapland, Sweden. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Tetrao Lagopus* Linnaeus the molting specimen depicted in the illustration by Rudbeck Jr. in his "Fogelboken" that is titled: "*Lagopus aestivalis*" and that has the number "141." written in the right-hand corner. The lectotype locality is Lapland, Sweden. "Fogelboken" *O. Rudbeck Jr.* ***Shelfmark: Leufsta MS*** *91* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). Olof Rudbeck Jr. was the first ecologist that travelled to Lapland. He recorded plenty of scientific observations from there. If we study the beak of the bird in the illustration, we can see that it indeed belongs to the species *L. lagopus* (Linnaeus) and that it is not a *Lagopus muta* Montin. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

59. Lagopus muta **(Montin, 1776) (Theropoda: Galliformes: Phasianidae)**

Protonym: *Tetrao, mutus* Montin, 1776.

60. Tetrao urogallus **Linnaeus, 1758 (Theropoda: Galliformes: Phasianidae)**

In the original description, there are syntypes of the subspecies now known as *Tetrao urogallus urogallus* Linnaeus (i.e., the individuals from "Fauna Svecica"). There are syntypes of the subspecies now known as *Tetrao urogallus crassirostris* Brehm (i.e., the individuals in the works of Aldrovandi and Gesner). There are syntypes of the subspecies now known as *Tetrao urogallus volgensis* Buturlin (i.e., the individual in the work by Albin). To restrict this name to the nominate subspecies, *Tetrao urogallus urogallus*, I shall designate

a lectotype. This is not a mere curatorial exercise as I want to maintain taxonomic stability. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Tetrao urogallus* Linnaeus the adult male specimen depicted in the illustration by Rudbeck Jr. in his "Portföljen" that is titled: "Tiäder" and that has the number "7." written in the right-hand corner. The lectotype locality is Sweden. "Fogelboken, portföljen" *O. Rudbeck Jr.* ***förvaring i KoB, E*** *32b* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

61. ***Phasianus colchicus*** **Linnaeus, 1758 (Theropoda: Galliformes: Phasianidae)**
62. ***Pavo cristatus*** **Linnaeus, 1758 (Theropoda: Galliformes: Phasianidae)**
63. ***Gallus gallus*** **(Linnaeus, 1758) (Theropoda: Galliformes: Phasianidae) Protonym:** *Phasianus Gallus* Linnaeus, 1758
64. ***Columba livia*** **Gmelin, 1789 (Theropoda: Columbiformes Latham, 1790a: Columbidae Leach, 1820). NEOTYPE:** Designated by Donegan (2016) in "Bulletin of the British Ornithologists' Club" 136(1): 14–27. It is an adult male from Fair Isle, Shetland Islands, Scotland, United Kingdom, *G. Wilson* ***BMNH*** *1934.1.1.1804* ***ZOO NHMUK:ecatalogue:*** *7700451* ***barcode:*** *011898995* (Natural History Museum at Tring, Tring, England, United Kingdom).
65. ***Columba palumbus*** **Linnaeus, 1758 (Theropoda: Columbiformes: Columbidae)**
66. ***Streptopelia decaocto*** **(Frivaldszky von Frivald, 1838) (Theropoda: Columbiformes: Columbidae) Protonym:** *Columba decaocto* Frivaldszky von Frivald, 1838. **HOLOTYPE:** Tundzha river valley (This is close to Edirne, Turkey) *F. Frivaldszky von Frivald* (Museum für Naturkunde, Berlin, Germany). This specimen might be lost.
67. ***Columbina inca*** **(Lesson, 1847) (Theropoda: Columbiformes: Columbidae) Protonym:** *Chamaepelia inca* Lesson, 1847.
68. ***Zenaida asiatica*** **(Linnaeus, 1758) (Theropoda: Columbiformes: Columbidae) Protonym:** *Columba asiatica* Linnaeus, 1758.
69. ***Chlamydotis macqueenii*** **(Gray, 1832) (Theropoda: Otidiformes Wagler, 1830b: Otididae Rafinesque, 1815) Protonym:** *Otis macqueenii* Gray, 1832. **HOLOTYPE:** It is an immature individual from the Himalayas, India, *T. MacQueen* ***BMNH*** *Old Vellum Cat.37.12a* ***ZOO NHMUK:ecatalogue:*** *3432067* ***barcode:*** *012289922* (Natural History Museum at Tring, Tring, England, United Kingdom).

70. ***Dromococcyx phasianellus*** **(Von Spix, 1824) (Theropoda: Cuculiformes Wagler, 1830b: Cuculidae Leach, 1820)** **Protonym:** *Macropus phasianellus* Von Spix, 1824. **HOLOTYPE:** Adult individual. Tonantins, Amazonas, Brazil, *J. B. Von Spix* (Zoologische Staatssammlung München, Munich, Bavaria, Germany).

71. ***Geococcyx californianus*** **(Lesson, 1829) (Theropoda: Cuculiformes: Cuculidae)** **Protonym:** *Saurothera californiana* Lesson, 1829. **HOLOTYPE:** Adult individual from San Diego, California, United States of America, *P. E. Botta* (Private collection of prince François Victor Masséna de Rivoli, Paris, Île-de-France, France). Grinnell (1932) in "University of California Publications in Zoology" 38(3): 243–324 says the holotype is now lost.

72. ***Piaya cayana*** **(Linnaeus, 1766) (Theropoda: Cuculiformes: Cuculidae)** **Protonym:** *Cuculus cayanus* Linnaeus, 1766. In the original description, Linnaeus cites as the syntypes for this species a morphospecies that Mathurin Jacques Brisson cites as "le coucou de Cayenne" and another morphospecies that Brisson cites as "le petit coucou de Cayenne." These morphospecies are described and illustrated in the book by Brisson (1760) that is titled: "Ornithologie ou Methóde Contenant la Division des Oiseaux en Ordres, Sections, Genres, Especes & leurs Variétés." Volume 4. I read Brisson's descriptions, and I studied his illustrations. I have concluded that Linnaeus thought that they were the mature and the immature form of the same bird. However, by looking at the description and the illustrations of the two morphospecies in the book by Brisson, it is evident that they are in fact accepted biological species. Le coucou de Cayenne is the species that we now know as *Piaya cayana* (Linnaeus). This can be known by how Brisson describes the color of its belly and by the drawing that depicts a bird with an extremely long tail. Le petit coucou de Cayenne is the species that we now know as *Piaya melanogaster* (Vieillot). This can be known because Brisson described the belly of this species as dark and by the drawing that shows a bird with a shorter tail than the tail of the other sympatric species of *Piaya* Lesson that lives in French Guiana. Furthermore, Brisson states that its total size is smaller than that of the other species of *Piaya*. To provide nomenclature stability, I shall designate a lectotype of *Piaya cayana*. I hereby designate as **LECTOTYPE** of *Cuculus cayanus* Linnaeus the specimen that is illustrated on the figure labeled "2. Coucou de Cayenne" on plate "Tom. IV. Pl. VIII." of the Book by Brisson (1760) that was previously cited. The lectotype locality is Cayenne, French Guiana. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

73. ***Nyctibius jamaicensis*** **(Gmelin, 1789) (Theropoda: Nyctibiiformes Yuri et al. 2013: Nyctibiidae Chenu & Des Murs, 1851) Protonym:** *Caprimulgus jamaicensis* Gmelin, 1789.

***74. Streptoprocne zonaris* (Shaw, 1796) (Theropoda: Apodiformes Peters, 1940: Apodidae Olphe-Galliard, 1887)** **Protonym:** *Hirundo zonaris* Shaw, 1796. **My comments**: You can see a depiction of two individuals of this species on **page 243.**

***75. Patagona gigas* (Vieillot, 1824) (Theropoda: Apodiformes: Trochilidae Vigors, 1825) Protonym:** *Trochilus gigas* Vieillot, 1824.

***76. Eugenes fulgens* (Swainson, 1827b) (Theropoda: Apodiformes: Trochilidae)** **Protonym:** *Trochilus fulgens* Swainson, 1827b. **HOLOTYPE:** An adult male from Temascaltepec, Estado de México, Mexico, W. Bullock & W. Bullock Jr. (Egyptian Hall, London, England, United Kingdom). This collection was auctioned according to Swainson (1827a) in "The Philosophical Magazine: or Annals of chemistry, mathematics, astronomy, natural history, and general science" 2(1): 364–369.

***77. Lamprolaima rhami* (Lesson, 1838) (Theropoda: Apodiformes: Trochilidae)** **Protonym:** *Ornismya Rhami* Lesson, 1838.

***78. Doricha enicura* (Vieillot, 1818) (Theropoda: Apodiformes: Trochilidae)** **Protonym:** *Trochilus enicurus* Vieillot, 1818. **HOLOTYPE:** Guatemala (Private collection of Meiffren Laugier de Chartrouse, Paris, Île-de-France, France) This specimen may be lost.

***79. Selasphorus heloisa* (Lesson & Delattre, 1839) (Theropoda: Apodiformes: Trochilidae) Protonym:** *Ornysmia Heloisa* Lesson & Delattre, 1839.

80. Cynanthus latirostris* Swainson, 1827b (Theropoda: Apodiformes: Trochilidae).** **SYNTYPE:** Adult male from Mexico, *W. Bullock & W. Bullock Jr.* ***UMZC *22/Tro/33/a/1* (Cambridge University Museum of Zoology, Cambridge, England, United Kingdom).

81. Chalybura urochrysia* (Gould, 1861) (Theropoda: Apodiformes: Trochilidae)** **Protonym:** *Hypuroptila urochrysia* Gould, 1861. **HOLOTYPE:** Adult specimen from western Colombia, *J. Warszewicz 1888.7.25.144* ***ZOO NHMUK:ecatalogue: *3426913* ***barcode:*** *011588523* (The Natural History Museum London, London, England, United Kingdom). In the original description, the locality is written as Panama, but Warszewicz mislabeled his specimens according to Junger (2017) in "Salamandra" 53(1): 18–24. The real locality is western Colombia according to Eisenmann & Howell (1962) in "The Condor" 64: 300–310.

82. Rallus tenuirostris* Ridgway, 1874b (Theropoda: Gruiformes Bonaparte, 1854: Rallidae Rafinesque, 1815)** **Protonym:** *Rallus elegans* var. *tenuirostris* Ridgway, 1874b. **HOLOTYPE:** Adult specimen from Mexico City, Mexico *A. J. Grayson* ***AMNH SKIN *45658* (American Museum of Natural History, New York City, New York, United States of America)

***83. Gallirallus australis* (Sparrman, 1786) (Theropoda: Gruiformes: Rallidae)** **Protonym:** *Rallus australis* Sparrman, 1786.

84. Porphyrio hochstetteri* (Meyer, 1883) (Theropoda: Gruiformes: Rallidae)** **Protonym:** *Notornis Hochstetteri* Meyer, 1883. **HOLOTYPE:** Adult found 14.5 km to the southeast of the south end of Lake Te Anau, South Island, New Zealand ***Dr. Mus. *4341* (Staatliches Museum für Tierkunde, Dresden, Saxony, Germany). This specimen was destroyed during World War II according to Ballance (2001) in "The Takahe: Fifty Years of Conservation

Management and Research." However, you can still see four illustrations of the holotype in the original description.

85. ***Antigone canadensis*** **(Linnaeus, 1758) (Theropoda: Gruiformes: Gruidae Vigors, 1825) Protonym:** *Ardea canadensis* Linnaeus, 1758.

86. ***Grus grus*** **(Linnaeus, 1758) (Theropoda: Gruiformes: Gruidae) Protonym:** *Ardea grus* Linnaeus, 1758. **My comments**: You can see a depiction of an individual of this species on **page 302.**

87. ***Himantopus novaezelandiae*** **Gould, 1841 (Theropoda: Charadriiformes Huxley, 1867: Recurvirostridae Bonaparte, 1831) SYNTYPE:** Adult specimen from Port Nicholson, North Island, New Zealand, ***BMNH*** *1843.1.17.6* ***ZOO NHMUK:ecatalogue:*** *3921933* ***barcode:*** *012307876* (Natural History Museum at Tring, Tring, England, United Kingdom).

88. ***Eudromias morinellus*** **(Linnaeus, 1758) (Theropoda: Charadriiformes: Charadriidae Leach, 1820) Protonym:** *Charadrius morinellus* Linnaeus, 1758.

89. ***Charadrius vociferus*** **Linnaeus, 1758 (Theropoda: Charadriiformes: Charadriidae)**

90. ***Vanellus vanellus*** **(Linnaeus, 1758) (Theropoda: Charadriiformes: Charadriidae) Protonym:** *Tringa Vanellus* Linnaeus, 1758.

91. ***Anarhynchus montanus*** **(Townsend, 1837) (Theropoda: Charadriiformes: Charadriidae) Protonym:** *Charadrius montanus* Townsend, 1837. **HOLOTYPE:** Adult female found near Sweetwater River, Wyoming, United States of America, *J. K. Townsend* ***ANSP*** *24353* (Academy of Natural Sciences of Drexel University, Philadelphia, Pennsylvania, United States of America)

92. ***Numenius tenuirostris*** **Vieillot, 1817 (Theropoda: Charadriiformes: Scolopacidae Rafinesque, 1815) HOLOTYPE:** An adult individual from Egypt, *G.-A. Olivier* ***MNHN-ZO-MO****-2012-171.* (Muséum National d'Histoire Naturelle, Paris, Île-de-France, France). **My comments:** This species is extinct. It became extinct at the beginning of the 21st century.

93. ***Calidris pugnax*** **(Linnaeus, 1758) (Theropoda: Charadriiformes: Scolopacidae) Protonym:** *Tringa pugnax* Linnaeus, 1758.

94. ***Lymnocryptes minimus*** **(Brünnich, 1764) (Theropoda: Charadriiformes: Scolopacidae) Protonym:** *Scolopax minima* Brünnich, 1764.

95. ***Gallinago media*** **(Latham, 1787) (Theropoda: Charadriiformes: Scolopacidae) Protonym:** *Scolopax media* Latham, 1787. **STNTYPE:** A vagrant adult individual from Lancashire, England, United Kingdom (Leverian Museum, London, England, United Kingdom). The contents of this collection were auctioned. You can read about this in the book by Kaeppler (2011) titled "Holophuscion, the Leverian Museum: an eighteenth-century English institution of science, curiosity, and art."

96. ***Cursorius cursor*** **(Latham, 1787) (Theropoda: Charadriiformes: Glareolidae Brehm, 1831) Protonym:** *Charadrius cursor* Latham, 1787.

97. ***Stercorarius maccormicki*** **Saunders, 1893 (Theropoda: Charadriiformes: Stercorariidae Gray, 1871) SYNTYPE:** Adult bird from Possession Island, Ross Sea, Antarctica *R. McCormick* ***BMNH*** *1891.6.16.9* ***ZOO NHMUK:ecatalogue:****3428152* ***barcode:***

011939587 (Natural History Museum at Tring, Tring, England, United Kingdom).

***98. Fratercula arctica* (Linnaeus, 1758) (Theropoda: Charadriiformes: Alcidae Leach, 1820) Protonym:** *Alca arctica* Linnaeus, 1758.

***99. Chroicocephalus ridibundus* (Linnaeus, 1766) (Theropoda: Charadriiformes: Laridae Rafinesque, 1815) Protonym:** *Larus ridibundus* Linnaeus, 1766.

***100. Leucophaeus atricilla* (Linnaeus, 1758) (Theropoda: Charadriiformes: Laridae) Protonym:** *Larus Atricilla* Linnaeus, 1758.

***101. Larus michahellis* Naumann, 1840 (Theropoda: Charadriiformes: Laridae)**

***102. Rynchops niger* Linnaeus, 1758 (Theropoda: Charadriiformes: Laridae)**

***103. Onychoprion fuscatus* (Linnaeus, 1766) (Theropoda: Charadriiformes: Laridae) Protonym:** *Sterna fuscata* Linnaeus, 1766.

104. Phoenicopterus ruber* Linnaeus, 1758 (Theropoda: Phoenicopteriformes Fürbringer, 1888: Phoenicopteridae Bonaparte, 1831)** Among the syntypes of Linnaeus there are specimens from the New World belonging to the species that is now known as *Phoenicopterus ruber*. There are also individuals from Europe and Africa of the species now known as *Phoenicopterus roseus* Pallas. To maintain taxonomic stability, I shall designate a lectotype for this species. In the original description, Linnaeus cited the book titled: "The Natural History of Carolina, Florida and the Bahama islands," volume 1 by Catesby (1731). I hereby designate the following **LECTOTYPE** of *Phoenicopterus ruber* Linnaeus: It is the adult individual depicted on the painting known as "*Phoenicopterus*" on t. 73 of the book by Catesby (1731). Bahama Islands *M. Catesby* ***RL *25908* (Royal Library, Windsor Castle, Windsor, England, United Kingdom). Catesby (1731) says that they live in the Bahamas. So lectotype locality is the Bahamas. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

***105. Phoenicopterus roseus* Pallas, 1811 (Theropoda: Phoenicopteriformes: Phoenicopteridae)** Among the syntypes of Pallas there are specimens from the New World belonging to the species that is now known as *Phoenicopterus ruber* Linnaeus. There are also individuals from Europe of the species now known as *Phoenicopterus roseu*s. To maintain taxonomic stability, I shall designate a lectotype for this species. Pallas saw this bird in Russia, as he said in the original description. The collections of Pallas were housed in the Russian Academy of Sciences of St. Petersburg. Nevertheless, there are no specimens of *Phoenicopterus roseus* collected by Pallas in such collection. I was informed about this by Vadim Vysotsky (personal communication), who is a curator of birds at the Zoological Institute of the Russian Academy of Sciences. Pallas sent some of his collections to Berlin. Plenty of the specimens of the Berlin Museum were destroyed there during World War II. I do not know if a *Phoenicopterus roseus*

collected by Pallas in Russia was destroyed during that war, but there are no extant specimens that match such description according to Sylke Frahnert (personal communication), the curator of birds of the Museum für Naturkunde. My only remaining option is to select a published illustration as a lectotype. Pallas cites among his syntypes in his original description the specimens cited in the book by Ray (1678) that is titled: "The ornithology of Francis Willughby of Middleton in the county of Warwick, esq." I hereby designate as **LECTOTYPE** of *Phoenicopterus roseus* Pallas the specimen on the illustration labeled as "*Phoenicopterus* The Flammant" on "Tab LX" of the book by Ray (1678). John Ray states in the text of his book that he and his friend Francis Willughby saw it in Montpellier, Hérault, Occitanie, France. This is the lectotype locality. For morphological studies, the color version of the book by John Ray is preferred. There is also a black-and-white version of this same book. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

***106. Phaethon rubricauda* Boddaert, 1783 (Theropoda: Phaethontiformes Sharpe, 1891: Phaethontidae Von Brandt, 1840)**

***107. Aptenodytes patagonicus* Miller, 1778 (Theropoda: Sphenisciformes Sharpe, 1891: Spheniscidae Bonaparte, 1831)**

108. Megadyptes antipodes* (Hombron & Jacquinot, 1841) (Theropoda: Sphenisciformes: Spheniscidae) Protonym:** *Catarrhactes antipodes* Hombron & Jacquinot, 1841. **LECTOTYPE:** Designated by Voisin & Mougin (2002) in "Zoosystema" 24(1): 187–190. It is an adult from Auckland Islands, New Zealand 50° 41′ 33″ S; 166° 4′ 47.28″ E, *J. B. Hombron & H. Jacquinot* ***MNHN-ZO-MO*-2000-3292*. (Muséum national d'Histoire Naturelle, Paris, Île-de-France, France).

***109. Eudyptula minor* (Forster, 1781a) (Theropoda: Sphenisciformes: Spheniscidae). Protonym:** *Aptenodytes minor* Forster, 1781a.

110. Spheniscus humboldti* Meyen, 1834 (Theropoda: Sphenisciformes: Spheniscidae) HOLOTYPE:** Adult individual from Callao, Peru, *F. J. F. Meyen* ***ZMB *14469* (Museum für Naturkunde, Berlin, Germany).

111. Phoebastria immutabilis* (Rothschild, 1893) (Theropoda: Procellariiformes Fürbringer, 1888: Diomedeidae Gray, 1840) Protonym**: *Diomedea immutabilis* Rothschild, 1893. **HOLOTYPE:** Adult female from Laysan Island, Hawaii, United States of America, *H. C. Palmer* ***No. *1163,* ***AMNH SKIN*** *526849* (American Museum of Natural History, New York City, New York, United States of America).

112. Fregetta maoriana* (Mathews, 1932) (Theropoda: Procellariiformes: Oceanitidae Forbes, 1881) Protonym:** *Palaeornis maoriana* Mathews, 1932. **HOLOTYPE:** Adult from Banks Peninsula, South Island, New Zealand, *G. C. Steel* ***BMNH *1895.2.1.11* ***ZOO***

NHMUK:ecatalogue:*3428557* ***barcode:*** *011965179* (Natural History Museum at Tring, Tring, England, United Kingdom).

113.Hydrobates macrodactylus **(Bryant 1887) (Theropoda: Procellariiformes: Hydrobatidae Mathews, 1912a) Protonym:** *Oceanodroma leucorhoa macrodactyla* Bryant, 1887. **SYNTYPES:** An adult male from Isla Guadalupe, Baja California, Mexico *W. E. Bryant* ***CAS ORN*** *1*. An adult female from Isla Guadalupe, Baja California, Mexico *W. E. Bryant* ***CAS ORN*** *2* (California Academy of Sciences, San Francisco, California, United States of America). These two individuals are the only remains of the ornithology collection of the California Academy of Sciences that existed before 1906. All the other specimens were destroyed by fire due to an earthquake with epicenter in San Francisco, California that occurred on Wednesday 18th April 1906. This event was reported by Everett (2019) in "Proceedings of the California Academy of Sciences series 4" 65(7): 159–180. **My comments:** This species is extinct. It became extinct during the first half of the 20th century.

114.Pterodroma cookii **(Gray, 1843) (Theropoda: Procellariiformes: Procellariidae Leach, 1820) Protonym:** *Procellaria Cookii* Gray, 1843. **HOLOTYPE:** Adult individual found near Mangaoraka stream, near Kamiro in the north of Taranaki, North Island, New Zealand ***BMNH*** *1842.9.29.14* ***ZOO NHMUK:ecatalogue:****3921915* ***barcode:*** *012313133* (Natural History Museum at Tring, Tring, England, United Kingdom).

115.Procellaria westlandica **Falla, 1946 (Theropoda: Procellariiformes: Procellariidae) Protonym:** *Procellaria parkinsoni westlandica* Falla, 1946. **HOLOTYPE:** Barrytown, Westland, South Island, New Zealand (Canterbury Museum, Chirstchurch, South Island, New Zealand).

116.Ciconia nigra **(Linnaeus, 1758) (Theropoda: Ciconiiformes Bonaparte, 1854: Ciconiidae Sundevall, 1836) Protonym:** *Ardea nigra* Linnaeus, 1758.

117.Ciconia ciconia **(Linnaeus, 1758) (Theropoda: Ciconiiformes: Ciconiidae) Protonym:** *Ardea Ciconia* Linnaeus, 1758.

118.Ephippiorhynchus senegalensis **(Shaw, 1800) (Theropoda: Ciconiiformes: Ciconiidae) Protonym:** *Mycteria Senegalensis* Shaw, 1800.

119.Fregata magnificens **Mathews, 1914 (Theropoda: Suliformes Sharpe, 1891: Fregatidae Degland & Gerbe, 1867) Protonym:** *Fregata minor magnificens* Mathews, 1914. **LECTOTYPE:** Designated by E. Hartert as reported by Greenway (1973) in the "Bulletin of the American Museum of Natural History" 150(3). It is an adult male from Santa Fe Island, Islas Galápagos, Ecuador, *G. Bauer* ***No.*** *259* ***AMNH SKIN*** *729509.* (American Museum of Natural History, New York City, New York, United States of America).

120.Fregata minor **(Gmelin, 1789) (Theropoda: Suliformes: Fregatidae) Protonym:** *Pelecanus minor* Gmelin, 1789.

121.Morus bassanus **(Linnaeus, 1758) (Theropoda: Suliformes: Sulidae Reichenbach, 1849) Protonym:** *Pelecanus Bassanus* Linnaeus, 1758.

122.Sula brewsteri **Goss, 1888 (Theropoda: Suliformes: Sulidae) SYNTYPES:** An adult male from Isla San Pedro Mártir, Sonora, Mexico, *N. S. Goss,* ***USNM*** *113436*. An adult female from Isla San Pedro Mártir, Sonora, Mexico, *N. S. Goss,* ***USNM*** *113437* (Smithsonian National Museum of Natural History, Washington DC, United States of America). An adult

from Isla San Pedro Mártir, Sonora, Mexico, *N. S. Goss, 71383.* An adult from Isla San Pedro Mártir, Sonora, Mexico, *N. S. Goss, 71384* (KU Biodiversity Institute and Natural History Museum, The University of Kansas, Lawrence, Kansas, United States of America).

123.Sula nebouxii* Milne-Edwards, 1882 (Theropoda: Suliformes: Sulidae) HOLOTYPE:** Adult male from the west coast of South America, *A. S. Néboux* ***MNHN-ZO-MO*-1991-512* (Muséum national d'Histoire Naturelle, Paris, Île-de-France, France).

***124.Phalacrocorax carbo* (Linnaeus, 1758) (Theropoda: Suliformes: Phalacrocoracidae Reichenbach, 1850) Protonym:** *Pelecanus Carbo* Linnaeus, 1758.

125.Nannopterum harrisi* (Rothschild, 1898) (Theropoda: Suliformes: Phalacrocoracidae) Protonym:** *Phalacrocorax harrisi* Rothschild, 1898. **LECTOTYPE:** Designated by E. Hartert as reported by Greenway (1973) in the "Bulletin of the American Museum of Natural History" 150(3). It is an adult male from Fernandina Island, Islas Galápagos, Ecuador, *G. D. Hull,* ***AMNH SKIN *730356.* (American Museum of Natural History, New York City, New York, United States of America)

***126.Nannopterum brasilianum* (Gmelin, 1789) (Theropoda: Suliformes: Phalacrocoracidae) Protonym:** *Procellaria brasiliana* Gmelin, 1789.

***127.Leucocarbo bougainvilliorum* (Lesson, 1837) (Theropoda: Suliformes: Phalacrocoracidae) Protonym:** *Carbo Bougainvillii* Lesson, 1837.

***128.Eudocimus albus* (Linnaeus, 1758) (Theropoda: Pelecaniformes Sharpe, 1891: Threskiornithidae Poche, 1904) Protonym:** *Scolopax alba* Linnaeus, 1758.

***129.Egretta caerulea* (Linnaeus, 1758) (Theropoda: Pelecaniformes: Ardeidae Leach, 1820) Protonym:** *Ardea caerulea* Linnaeus, 1758.

***130.Ardea bennuides* Hoch, 1979 (Theropoda: Pelecaniformes: Ardeidae). HOLOTYPE:** Tibiotarsus. Holocene from Umm an-Nar, Abu Dhabi, United Arab Emirates, **ZMK**-115-1966 (Zoologisk Museum, Københavns Universitet, Copenhaguen, Denmark). **My comments:** This species is extinct. The type specimen lived around 5000 years ago.

131.Pelecanus erythrorhynchos* Gmelin, 1789 (Theropoda: Pelecaniformes: Pelecanidae Rafinesque, 1815). SYNTYPE:** Adult individual from North America ***NMW *1806.III.89* (Naturhistorisches Museum Wien, Vienna, Austria).

***132.Pelecanus occidentalis* Linnaeus, 1766 (Theropoda: Pelecaniformes: Pelecanidae) Protonym:** *Pelecanus Onocrotalus occidentalis* Linnaeus, 1766. In the original descrption, Linnaeus cites specimens of the subspecies that we would now refer to as *Pelecanus occidentalis occidentalis* Linnaeus. He also cites specimens of the subspecies that we would now refer to as *Pelecanus occidentalis carolinensis* Gmelin (i.e., the specimen in the work by Ellis (1749) that is titled "A Voyage to Hudson's Bay"). To maintain taxonomic stability, I shall designate a lectotype. I hereby designate as **LECTOTYPE** of *Pelecanus Onocrotalus occidentalis* Linnaeus the specimen that is depicted on illustration 93 of the book by Edwards (1750) that is titled: "A natural history of uncommon birds: and of some

other rare and undescribed animals, quadrupedes, fishes, reptiles, insects, &c." The Lectotype locality is the West Indies. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

133. Sarcoramphus papa **(Linnaeus, 1758) (Theropoda: Cathartiformes Coues, 1884: Cathartidae De Lafresnaye, 1839) Protonym:** *Vultur Papa* Linnaeus, 1758**. LECTOTYPE:** Designated by Mlíkovský (2015) in "Zootaxa" 3918(4): 579–586. It is the juvenile individual depicted on illustration number 2 of the book by Edwards (1750) that is titled: "A natural history of uncommon birds: and of some other rare and undescribed animals, quadrupedes, fishes, reptiles, insects, &c." Lectotype locality is Latin America.

134. Vultur gryphus **Linnaeus, 1758 (Theropoda: Cathartiformes: Cathartidae)**

135. Coragyps atratus **(Bechstein, 1793) (Theropoda: Cathartiformes: Cathartidae) Protonym:** *Vultur atratus* Bechstein, 1793.

136. Cathartes aura **(Linnaeus, 1758) (Theropoda: Cathartiformes: Cathartidae) Protonym:** *Vultur Aura* Linnaeus, 1758.

137. Pandion haliaetus **(Linnaeus, 1758) (Theropoda: Accipitriformes Vieillot, 1816a: Pandionidae Sclater & Salvin, 1873) Protonym:** *Falco Haliaetus* Linnaeus, 1758.

138. Gypaetus barbatus **(Linnaeus, 1758) (Theropoda: Accipitriformes: Accipitridae Vigors, 1824) Protonym:** *Vultur barbatus* Linnaeus, 1758.

139. Aegypius monachus **(Linnaeus, 1766) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Vultur monachus* Linnaeus, 1766.

140. Gyps indicus **(Scopoli, 1786) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Vultur (indicus)* Scopoli, 1786. **My comments:** This species is not mentioned in this book, but it appears depicted on **page 659.** The reason is that the message sent by Mariana (personal communication) using ICQ that is quoted in this book involves human-eating vultures. In the "Vendidad" a book of the Zoroastrian "Avesta," it is stated that people should be eaten by vultures in Towers of Silence after they die. Late 20th century Zoroastrians in India still practiced this tradition and one of the species of vulture involved was *Gyps indicus*. This is according to Markandya et al. (2008) in "Ecological Economics" 67(2): 194–204.

141. Spizaetus tyrannus **(Zu Wied-Neuwied,1820) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco Tyrannus* Zu Wied-Neuwied, 1820. **HOLOTYPE:** Female adult from Brazil, *A. P. M. Zu Wied-Neuwied* ***RMNH.AVES****.87265* (Naturalis Biodiversity Center, Leiden, Netherlands).

142. Spizaetus melanoleucus **(Vieillot, 1816c) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Buteo melanoleucus* Vieillot, 1816c. **HOLOTYPE:**

Adult from Cayenne, French Guiana, *J. B. Leblond,* ***MNHN-ZO-MO****-2000-1631* (Muséum National d'Histoire Naturelle, Paris, Île-de-France, France)

143.Spizaetus ornatus **(Daudin, 1800) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco ornatus* Daudin, 1800.

144.Aquila adalberti **Brehm, 1861 (Theropoda: Accipitriformes: Accipitridae) LECTOTYPE:** Designated by E. Hartert as reported by Greenway (1973) in the "Bulletin of the American Museum of Natural History" 150(3). It is a juvenile female from Spain, *R. Brehm,* ***AMNH SKIN*** *535159.* (American Museum of Natural History, New York City, New York, United States of America).

145.Aquila chrysaetos **(Linnaeus, 1758) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco Chrysaëtos* Linnaeus, 1758. **My comments:** You can see a depiction of two individuals of this species on **page 185.**

146.Harpia harpyja **(Linnaeus, 1758) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Vultur Harpyja* Linnaeus, 1758.

147.Circus aeruginosus **(Linnaeus, 1758) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco aeruginosus* Linnaeus, 1758.

148.Circus hudsonius **(Linnaeus, 1766) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco hudsonius* Linnaeus, 1766.

149.Haliaeetus albicilla **(Linnaeus, 1758) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco Albicilla* Linnaeus, 1758. In the original description, Linnaeus cites several European specimens of this species. However, he also cites a specimen that belongs to the species that we now know as *Haliaeetus leucocephalus* (Linnaeus). This specimen is described and illustrated in "The Natural History of Carolina, Florida and the Bahama islands," volume 1 by Catesby (1731). Therefore, to provide nomenclature stability, I shall designate a lectotype from Europe. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Falco Albicilla* Linnaeus the adult specimen depicted on the illustration by Rudbeck Jr. in his "Portföljen" that is titled: "Hafs-Örn" and that has the number "6." written in the right-hand corner. The lectotype locality is Sweden. "Fogelboken, portföljen" O. Rudbeck Jr. förvaring i KoB, E 32b (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

150.Buteogallus solitarius **(Von Tschudi, 1844) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Circäetus*

solitarius Von Tschudi, 1844. **HOLOTYPE:** Adult individual from Río Chancamayo, Junín, Peru, *J.-J. von Tschudi* ***MHNN*** *92-3363* (Muséum d'Histoire Naturelle de Neuchâtel, Neuchâtel, Canton de Neuchâtel, Switzerland.)

151. Parabuteo unicinctus **(Temminck, 1824) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco unicinctus* Temminck, 1824. **HOLOTYPE:** Adult individual from Boa-Vista, Rio Grande do Sul, Brazil, *A. Saint-Hilaire* ***MNHN-ZO-MO****-2000-1618* (Muséum National d'Histoire Naturelle, Paris, Île-de-France, France).

152. Pseudastur albicollis **(Latham, 1790a) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco albicollis* Latham, 1790a.

153. Buteo swainsoni **Bonaparte, 1838 (Theropoda: Accipitriformes: Accipitridae) HOLOTYPE:** Adult individual from Columbia River, United States of America, *J. K. Townsend*. This specimen might be lost, but a painting of it was made by John James Audubon. *J. J. Audubon 1863.17.372* (New-York Historical Society Museum & Library, New York City, New York, United States of America).

154. Buteo lagopus **(Pontoppidan, 1763) (Theropoda: Accipitriformes: Accipitridae) Protonym:** *Falco Lagopus* Pontoppidan, 1763.

155. Tyto alba **(Scopoli, 1769) (Theropoda: Strigiformes Wagler, 1830b: Tytonidae Mathews, 1912b) Protonym:** *Strix alba* Scopoli, 1769.

156. Tyto furcata **(Temminck, 1827) (Theropoda: Strigiformes: Tytonidae) Protonym:** *Strix furcata* Temminck, 1827.

157. Megascops kennicottii **(Elliot, 1867) (Theropoda: Strigiformes: Strigidae Leach, 1820) Protonym:** *Scops Kennicottii* Elliot, 1867. **HOLOTYPE:** Adult male from Baranof Island, Sitka, Alaska, United States of America, *F. Bischoff* ***USNM*** *45847* (Smithsonian National Museum of Natural History, Washington DC, United States of America).

158. Megascops asio **(Linnaeus, 1758) (Theropoda: Strigiformes: Strigidae) Protonym:** *Strix Asio* Linnaeus, 1758

159. Bubo virginianus **(Gmelin, 1788) (Theropoda: Strigiformes: Strigidae) Protonym:** *Strix virginiana* Gmelin, 1788. In the original description, Gmelin cites specimens from Astracania. These specimens were mentioned in the book by Pennant (1785) that is known as "Arctic Zoology" volume 2. I studied a map made in 1659 that is titled "Atlas Novus" by Joan Bleau. In such map I found out that "Astracania" is the old name for the region between the Black Sea and the Caspian Sea. Therefore, the syntypes from Astracania belong to the species *Bubo bubo* (Linnaeus). In addition to that specimen, Gmelin also cites a specimen from Hudson Bay, Canada. This specimen comes from the book by Ellis (1749) that is titled "A Voyage to Hudson's Bay." This would belong to the subspecies that we now know as *Bubo virginianus subarcticus* Hoy. All the other syntypes belong to the subspecies that we now know as *Bubo virginianus virginianus* Gmelin. Therefore, to maintain taxonomic stability, I shall designate a lectotype. I hereby designate as **LECTOTYPE** of *Strix virginiana* Gmelin the specimen that is depicted on illustration 60 of the book by Edwards (1750) that is titled: "A natural history of uncommon birds: and of some

other rare and undescribed animals, quadrupedes, fishes, reptiles, insects, &c." The subject of this painting was a captive bird from Virginia that was kept as a pet by the Earl of Burlington in his house in Chiswick, London. The Lectotype locality is Virginia, United States of America. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

160.Bubo bubo **(Linnaeus, 1758) (Theropoda: Strigiformes: Strigidae) Protonym:** *Strix Bubo* Linnaeus, 1758.

161.Athene noctua **(Scopoli, 1769) (Theropoda: Strigiformes: Strigidae) Protonym:** *Strix noctua* Scopoli, 1769.

162.Strix sartorii **(Ridgway, 1874a) (Theropoda: Strigiformes: Strigidae) Protonym:** *Syrnium nebulosum* var. *Sartorii* Ridgway, 1874a. **HOLOTYPE:** Adult female from *Pinus* Linnaeus forest close to Hacienda del Mirador, Veracruz, Mexico, *K. C. Sartorius* ***USNM*** *42131* (Smithsonian National Museum of Natural History, Washington DC, United States of America)

163.Asio otus **(Linnaeus, 1758) (Theropoda: Strigiformes: Strigidae) Protonym:** *Strix Otus* Linnaeus, 1758. **My comments**: You can see a depiction of an individual of this species on **page 191.**

164.Ninox novaeseelandiae **(Gmelin, 1788) (Theropoda: Strigiformes: Strigidae) Protonym:** *Strix novae Seelandiae* Gmelin, 1788.

165.Euptilotis neoxenus **(Gould, 1838) (Theropoda: Trogoniformes Coues et al. 1886: Trogonidae Lesson, 1828b) Protonym:** *Trogon neoxenus* Gould, 1838. **HOLOTYPE:** Female from Mexico, *J. Taylor*. (Museum of the Zoological Society of London, London, England, United Kingdom). This museum was dissolved in 1854 according to Wheeler (1997) in "Archives of Natural History" 24(1): 89–126. Even if this specimen is lost you can still see a gorgeous painting of her in the original description.

166.Pharomachrus mocinno **De la Llave, 1832 (Theropoda: Trogoniformes: Trogonidae) SYNTYPES:** Several skins from Guatemala, *J. M. Mociño y Losada & J. Longinos Martínez* (Palacio del Buen Retiro, Madrid, Spain). Several male tail feathers from Guatemala in a dress that belonged to Queen Maria Luisa of Parma, *J. M. Mociño y Losada & J. Longinos Martínez* (Palacio Real de Madrid, Madrid, Spain). **NEOTYPE:** Designated by Miller et al. (1957) in "Pacific Coast Avifauna" 33: 1–436. It is an adult individual from Guatemala (Museo del Chopo, Ciudad de México, Mexico). In the original description it is stated that the syntypes from Palacio del Buen Retiro were being eaten by insects. These insects were very likely coleopterans that belonged to the family Dermestidae Latreille. The dress of the queen is lost. The neotype was already lost in 1965 according to Dickerman (1987) in "The Proceedings of the Western Foundation of Vertebrate Zoology" 3(2): 51–107.

***167. Trogon elegans* Gould, 1834 (Theropoda: Trogoniformes: Trogonidae) SYNTYPES:** A male and a female from Guatemala. In the original description it is stated that the specimens of the species of *Trogon* Brisson and *Harpactes* Swainson that are cited in the paper came from two different collections. However, the collection where the *Trogon elegans* syntypes were stored is never indicated.

***168. Trogon mexicanus* Swainson, 1827b (Theropoda: Trogoniformes: Trogonidae) HOLOTYPE:** An adult female from Temascaltepec, Estado de México, Mexico, *W. Bullock & W. Bullock Jr.* (Egyptian Hall, London, England, United Kingdom). This collection was auctioned according to Swainson (1827a) in "The Philosophical Magazine: or Annals of chemistry, mathematics, astronomy, natural history, and general science" 2(1): 364–369.

***169. Rhinoplax vigil* (Forster, 1781b) (Theropoda: Bucerotiformes Fürbringer, 1888: Bucerotidae Rafinesque, 1815) Protonym:** *Buceros vigil* Forster, 1781b.

170. Momotus mexicanus* Swainson, 1827b (Theropoda: Coraciiformes Forbes, 1884: Momotidae Gray, 1840) HOLOTYPE:** An adult individual from Temascaltepec, Estado de México, Mexico, *W. Bullock & W. Bullock Jr.* ***UMZC 25/Mom/6/a/1 (Cambridge University Museum of Zoology, Cambridge, England, United Kingdom).

***171. Momotus coeruliceps* (Gould, 1836) (Theropoda: Coraciiformes: Momotidae) Protonym:** *Prionites coeruliceps* Gould, 1836. **HOLOTYPE:** Adult individual from Tamaulipas, Mexico (Museum of the Zoological Society of London, London, England United Kingdom). This museum was dissolved in 1854 according to Wheeler (1997) in "Archives of Natural History" 24(1): 89–126.

***172. Momotus lessonii* Lesson, 1842 (Theropoda: Coraciiformes: Momotidae)**

***173. Eumomota superciliosa* (Sandbach, 1837) (Theropoda: Coraciiformes: Momotidae) Protonym:** *Pyronites superciliosus* Sandbach, 1837. **HOLOTYPE:** Adult individual from Mexico (Museum of the Royal Institution of Liverpool, Liverpool, England, United Kingdom). This specimen is not listed among the type specimens kept at the World Museum. This list was published by Wagstaffe (1978) as "Type Specimens of Birds in the Merseyside County Museums (formerly City of Liverpool Museums)." This specimen may be lost.

***174. Megaceryle alcyon* (Linnaeus, 1758) (Theropoda: Coraciiformes: Alcedinidae Rafinesque, 1815) Protonym:** *Alcedo Alcyon* Linnaeus, 1758. In the original description, Linnaeus cites a specimen from Brazil on page 194 of the book by Marcgrave (1648) that is titled: "Historia Naturalis Brasiliae." Such a specimen that is painted and described in such a book is an adult female individual of the species that we now know as *Chloroceryle amazona* (Latham). This can be seen in the continuous white feathers from her throat down to her belly. In *Megaceryle alcyon* there is always a band of colored feathers in the region where the crop is found. All the other syntypes chosen by Linnaeus belong to the species *Megaceryle alcyon*. To maintain taxonomic stability, I shall designate a lectotype. In the original description, Linnaeus cited the

book titled: "The Natural History of Carolina, Florida and the Bahama islands," volume 1 by Catesby (1731). I hereby designate the following **LECTOTYPE** of *Alcedo Alcyon* Linnaeus: It is the adult individual depicted on the painting known as "*Ispida* &c." on t. 69 of the book by Catesby (1731*). M. Catesby* ***RL*** *25904* (Royal Library, Windsor Castle, Windsor, England, United Kingdom). Lectotype locality is South Carolina, United states of America. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

175. Galbula ruficauda **Cuvier, 1816 (Theropoda: Galbuliformes Fürbringer, 1888: Galbulidae Vigors, 1825)**

176. Pteroglossus torquatus **(Gmelin, 1788) (Theropoda: Piciformes Meyer & Wolf, 1810: Ramphastidae Vigors, 1825) Protonym:** *Ramphastos torquatus* Gmelin, 1788.

177. Ramphastos sulfuratus **Lesson, 1830 (Theropoda: Piciformes: Ramphastidae) HOLOTYPE:** Adult individual from Mexico ***MNHN-ZO****-2008-790* (Muséum National d'Histoire Naturelle, Paris, Île-de-France, France).

178. Jynx torquilla **Linnaeus, 1758 (Theropoda: Piciformes: Picidae Leach, 1820)** In the original description, Linnaeus cites the work of Aldrovandi (1599) that is titled: "Vlyssis Aldrovandi philosophi ac medici Bononiensis historiam naturalem in gymnasio Bononiensi profitentis, Ornithologiae, hoc est, De avibus historiae libri XII." Aldrovandi was Italian, so his firsthand observations of *Jynx torquilla* were from Italian birds. He also refers to the nouns applied to *Jynx torquilla* in Italian dialects. Therefore, by citing Aldrovandi, Linnaeus is adding some Italian birds as syntypes of the species *Jynx torquilla*. The Italian birds of this species are considered to belong to the subspecies *Jynx torquilla tschusii* Kleinschmidt. Linnaeus also cites plenty of references of syntypes of the nominal subspecies *Jynx torquilla torquilla* Linnaeus. To maintain taxonomic stability, I shall designate a lectotype. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Jynx torquilla* Linnaeus the adult specimen depicted in the illustration by Rudbeck Jr. in his "Fogelboken" that is titled: "*Jynx*" and that has the number "117." written in the right-hand corner. The lectotype locality is Sweden. "Fogelboken" *O. Rudbeck Jr.* ***Shelfmark: Leufsta MS*** *91* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as

lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

179.Sphyrapicus thyroideus* (Cassin, 1852) (Theropoda: Piciformes: Picidae)** **Protonym:** *Picus thyroideus* Cassin, 1852. **LECTOTYPE:** Designated by W. Stone (1899) in "Proceedings of the Academy of Natural Sciences of Philadelphia" 51: 5–62. It is an adult female from California, United States of America, *J. G. Bell* ***ANSP *24214*. (Academy of Natural Sciences of Drexel University, Philadelphia, Pennsylvania, United States of America)

180.Melanerpes formicivorus* (Swainson, 1827b) (Theropoda: Piciformes: Picidae) Protonym:** *Picus formicivorus,* Swainson, 1827b. **HOLOTYPE:** Adult female from Temascaltepec, Estado de México, Mexico, *W. Bullock & W. Bullock Jr.* ***UMZC *26/Pic/19/i/1* (Cambridge University Museum of Zoology, Cambridge, England, United Kingdom).

***181.Melanerpes chrysogenys* (Vigors, 1839) (Theropoda: Piciformes: Picidae)** **Protonym:** *Picus chrysogenys* Vigors, 1839.

***182.Melanerpes aurifrons* (Wagler, 1829a) (Theropoda: Piciformes: Picidae)** **Protonym:** *Picus Aurifrons* Wagler, 1829a. **HOLOTYPE:** Adult from Mexico (Museum für Naturkunde, Berlin, Germany). This specimen might be lost.

***183.Dendrocopos leucotos* (Bechstein, 1802) (Theropoda: Piciformes: Picidae)** **Protonym:** *Picus leucotos* Bechstein, 1802.

184.Dryobates arizonae* (Hargitt, 1886) (Theropoda: Piciformes: Picidae)** **Protonym:** *Picus arizonae* Hargitt, 1886. **HOLOTYPE:** Adult male from Santa Rita mountains, Arizona, United States of America, *E. W. Nelson* ***BMNH *1898.3.10.1245.* ***ZOO NHMUK:ecatalogue:****2288552* ***barcode:*** *012308756* (Natural History Museum at Tring, Tring, England, United Kingdom).

***185.Campephilus principalis* (Linnaeus, 1758) (Theropoda: Piciformes: Picidae)** **Protonym:** *Picus principalis* Linnaeus, 1758 **My comments:** This species is extinct. It became extinct during the second half of the 20th century.

***186.Picus canus* Gmelin, 1788 (Theropoda: Piciformes: Picidae)**

187.Picus sharpei* (Saunders, 1872) (Theropoda: Piciformes: Picidae)** **Protonym:** *Gecinus sharpei* Saunders, 1872. **SYNTYPE:** Adult male from El Pardo, Madrid, Spain, *H. Saunders* ***BMNH *1907.12.20.183* ***ZOO NHMUK:ecatalogue:*** *3429544* ***barcode:*** *012284567* (Natural History Museum at Tring, Tring, England, United Kingdom).

***188.Colaptes rubiginosus* (Swainson, 1820) (Theropoda: Piciformes: Picidae)** **Protonym:** *Picus rubiginosus* Swainson, 1820. The type specimen may be lost, but there is an illustration of it in the original description.

189.Colaptes auricularis* (Salvin & Godman, 1889) (Theropoda: Piciformes: Picidae) Protonym:** *Chloronerpes auricularis* Salvin & Godman, 1889. **HOLOTYPE:** Adult individual from Chautipa, Tecoanapa, Guerrero, Mexico, *H. H. Smith* ***BMNH *1898.3.14.112* ***ZOO NHMUK:ecatalogue:*** *3428518* ***barcode:*** *012286945* (Natural History Museum at Tring, Tring, England, United Kingdom).

190.Falco deiroleucus* Temminck, 1825 (Theropoda: Falconiformes Sharpe, 1874: Falconidae Leach, 1820)** **HOLOTYPE:** Adult female from Ilha de São Francisco do Sul, Joinville, Santa Catarina, Brazil, *O. Fournier* ***MNHN-ZO-MO*-2001-401* (Muséum National d'Histoire Naturelle, Paris, Île-de-France, France).

***191.Falco rusticolus* Linnaeus, 1758 (Theropoda: Falconiformes: Falconidae)**

***192.Falco peregrinus* Tunstall, 1771 (Theropoda: Falconiformes: Falconidae)**

193.Nestor notabilis* Gould, 1856 (Theropoda: Psittaciformes Wagler, 1830b: Strigopidae Bonaparte, 1849)** **SYNTYPE:** Adult individual from Murihiku, South Island, New Zealand, *W. Mantell & J. Lemon* ***BMNH *1856.5.28.2* ***ZOO NHMUK:ecatalogue:*** *3424018* ***barcode:*** *012270111* (Natural History Museum at Tring, Tring, England, United Kingdom)

***194.Platycercus eximius* (Shaw, 1792) (Theropoda: Psittaciformes: Psittaculidae Vigors, 1825) Protonym:** *Psittacus eximius* Shaw, 1792.

***195.Myiopsitta monachus* (Boddaert, 1783) (Theropoda: Psittaciformes: Psittacidae Illiger, 1811) Protonym:** *Psittacus monachus* Boddaert, 1783.

***196.Amazona amazonica* (Linnaeus, 1766) (Theropoda: Psittaciformes: Psittacidae) Protonym:** *Psittacus amazonicus* Linnaeus, 1766. **My comments:** This species is not mentioned in the text of this book. However, an individual of this species can be seen in an illustration. It is an illustration of the allegory of the Americas (see **page 55**). When the Americas are allegorically depicted as a woman, she is often shown with a parrot. This is according to Le Corbeiller (1961) in "The Metropolitan Museum of Art Bulletin" 19: 210–223. Therefore, I decided to commission the allegory of the Americas as a young woman with a parrot.

***197.Forpus cyanopygius* (De Souancé, 1856) (Theropoda: Psittaciformes: Psittacidae) Protonym:** *Psittacula cyanopygia* De Souancé, 1856. **HOLOTYPE:** Adult individual from Mexico (Private collection of prince François Victor Masséna de Rivoli, Paris, Île-de-France, France). This specimen may be lost.

198.Anodorhynchus hyacinthinus* (Latham, 1790a) (Theropoda: Psittaciformes: Psittacidae) Protonym:** *Psittacus hyacinthinus* Latham, 1790a. **HOLOTYPE:** Adult individual from Brazil, *H. Walpole the Lord Orford* ***NMW *1806.III.135* (Naturhistorisches Museum Wien, Vienna, Austria).

***199.Rhynchopsitta pachyrhyncha* Swainson, 1827b (Theropoda: Psittaciformes: Psittacidae) Protonym:** *Macrocercus pachyrhynchus* Swainson, 1827b. **HOLOTYPE:** Adult individual from the highlands of Central Mexico, *W. Bullock & W. Bullock Jr.* (Egyptian Hall, London, England, United Kingdom). This collection was auctioned according to Swainson (1827a) in "The Philosophical Magazine: or Annals of chemistry, mathematics, astronomy, natural history, and general science" 2(1): 364–369. **My comments:** I am surprised by this record. William Bullock and his son, the antiquarians that collected the holotype of this species, travelled as far west as Temascaltepec, State of Mexico. This is written in the book by Bullock (1824) that is titled "Six Months' Residence and Travels

in Mexico." However, *Rhynchopsitta pachyrhyncha* does not live further east of Michoacán. Nevertheless, when I was collecting a plant named *Amicia zygomeris* De Candolle for Tiina Särkinen in Temascaltepec, the birthplace of José Mariano Mociño, I noticed that the habitat was very similar to the one in Pico de Tancítaro, Michoacán. I visited Pico de Tancítaro 3 years before. In both places there are plant species that are eaten by *Rhynchopsitta pachyrhyncha*. Furthermore, there are no apparent geographical barriers between both places. It is possible that this species was extirpated from the State of Mexico during the 19th century.

200.Rhynchopsitta terrisi* Moore, 1947 (Theropoda: Psittaciformes: Psittacidae) HOLOTYPE:** Adult male from the east base of Cerro Potosí, 2 km west of San Francisco de los Blancos, Nuevo León, Mexico, *C. C. Lamb,* ***MLZ:Bird:*42495.* **PARATYPE:** Adult female from the east base of Cerro Potosí, 2 km west of San Francisco de los Blancos, Nuevo León, Mexico, *C. C. Lamb,* ***MLZ:Bird:****42497* (Moore Laboratory of Zoology, Occidental College, Los Angeles, California, United States of America).

***201.Ara militaris* (Linnaeus, 1766) (Theropoda: Psittaciformes: Psittacidae) Protonym:** *Psittacus militaris* Linnaeus, 1766. In the original description, Linnaeus never cited any previous work where this species was described or illustrated. Neither does he cite the place of the world where this species comes from. This species is well known and the fact that Linnaeus does not cite a specimen or a locality for this species would not matter if there was only one subspecies. However, there are three different subspecies. Therefore, it is important to formally restrict the name *Ara militaris militaris* Linnaeus to a subspecies. The name *Ara militaris* was originally applied to all its subspecies without differentiating them from each other. Sometimes the name *Ara militaris* was applied as well to the species that we now know as *Ara ambiguus* (Bechstein). At the beginning of the 20th century, when the concept of subspecies became more important than in the previous century, the subspecies *Ara militaris bolivianus* Reichenow was published to include the isolated population of Bolivia and Argentina. After that, in 1912 Brabourne & Chubbs suggested a type locality for *Ara militaris militaris* in Colombia. They suggested this on page 80 of their work titled "The Birds of South America," volume 1. However, this would involve a nomenclatural issue, as the type locality suggested by them was not the locality of an actual real life type specimen as they never designated one. Therefore, *Ara militaris militaris* became a subspecies with a type locality and without a type specimen. This is absurd as type localities are the localities where type specimens were living in the wild. Without any knowledge of the wild origin of the specimen described by Linnaeus, Colombia was just a made-up locality. This change would require neotypification, as the specimen cited by Linnaeus might not have arrived in Europe from what is now Colombia. (At the time of Linnaeus, Colombia was part of the Viceroyalty of New Granada). It is impossible to ascertain the origin of the specimen described by Linnaeus, as the information that he provided was too scant. To maintain taxonomic stability, I shall designate a

neotype of *Ara militaris* from Colombia. This would allow to formally differentiate *Ara militaris militaris* from *Ara militaris bolivianus* and *Ara militaris mexicanus* Ridgway. By stating the nomenclatural need to designate a neotype, I have fulfilled condition **75.2** of the ICZN to designate a neotype. I am not designating it as an end or as a curatorial routine. As I have previously stated, I need to clarify the type locality based on an actual specimen to differentiate the different subspecies of *Ara militaris*. By saying so I am fulfilling condition **75.3.1** to designate a neotype. As I stated before, Linnaeus never cited a previously published description. This means that he based his description on a dead specimen that he studied. There are no birds in the collections of the Linnean Society of London. To find a possible syntype of *Ara militaris* used by Linnaeus in his description I checked the specimens belonging to the clade Aves in the catalogue of Linnean specimens of Uppsala Universitet written by Lars Wallin (2004). This catalogue lists the zoological specimens that remain from the time of Linnaeus regardless of their status as types. No specimens belonging to the family Psittacidae Illiger were found. The other source of specimens of birds described by Linnaeus was the natural history cabinet of King Adolf Frederick. Its collections are now in the Naturhistoriska Riksmuseet. I read the description of the collections of Adolf Frederick written by Linnaeus (1764) in his book "Museum S:ae R:ae M:tis Adolphi Friderici Regis." There were several species of Psittaculidae Vigors and Psittacidae in this collection. There was a specimen of *Psittacula alexandri* (Linnaeus). There was a specimen of *Lorius garrulus* (Linnaeus). There was a specimen of *Loriculus galgulus* (Linnaeus). There was a specimen of *Agapornis pullarius* (Linnaeus). There was a specimen of *Forpus passerinus* (Linnaeus). There was a specimen of *Pionites melanocephalus* (Linnaeus). There was a specimen of *Diopsittaca nobilis* (Linnaeus). There was a specimen of a species that was known as *Psittacus rufirostris* Linnaeus **nomen dubium**. This species is a small New World green parakeet with long tail feathers. It very likely belonged to the genera *Eupsittula* Bonaparte, *Thectocercus* Ridgway, or *Psittacara* Vigors. There were no specimens of the genus *Ara* De Lacépède. I performed this review of old specimens to fulfill requirement **75.3.4** of the ICZN; to show that no extant specimens of *Ara militaris* studied by Linnaeus remain with us. (Please read the glossary to know what "**nomen dubium**" means).

Ara militaris **(Linnaeus) Gray,** Gen. of B. 2 p. 412. 1849.

Protonym: *Psittacus militaris* Linnaeus, Syst. Nat. ed. 12. p. 139. 1766. **Synonyms:** *Macrocercus militaris* (Linnaeus) Vieillot, Nouv. Dict. Hist. Nat. nouv. ed. 2 p. 261. 1816. *Sittace militaris* (Linnaeus) Wagler, Abh. Math.-Phys. Kl., K. Bayer. Akad. Wiss. 1 p. 668. 1832.

Systematics:

Saurischia Seeley, 1887

Theropoda Marsh, 1881

Averostra Paul, 2002

Tetanurae Gauthier, 1986
Coelurosauria Von Huene, 1914
Tyrannoraptora Sereno, 1999
Maniraptoriformes Holtz & Padian, 1995
Maniraptora Gauthier, 1986
Pennaraptora Foth et al. 2014
Paraves Sereno, 1997
Eumaniraptora Padian et al. 1999
Averaptora Angolín & Novas, 2013
Avialae Gauthier, 1986
Euavialae Ji et al. 2002
Avebrevicauda Paul, 2002
Pygostylia Chatterjee, 1997
Ornithothoraces Chiappe & Calvo, 1994
Euornithes Stejneger, 1884
Ornithuromorpha Chiappe et al. 1999
Ornithurae Haeckel, 1866
Aves Linnaeus, 1758
Neognathae Pycraft, 1900
Neoaves Sibley, et al. 1988
Passerea Jarvis et al. 2014
Telluraves Yuri et al. 2013
Australaves Ericson, 2012
Eufalconimorphae Suh et al. 2011
Psittacopasserae Suh et al. 2011
Psittaciformes Wagler, 1830b
Psittacidae Illiger, 1811
Ara militaris (Linnaeus, 1766)

Description: *Ara militaris* is a multicellular organism with nucleated cells. It lacks cell walls. It does not have photosynthesizing organelles. It translates nuclear mRNA to proteins using the standard genetic code. It translates mitochondrial mRNA to proteins using the vertebrate mitochondrial genetic code. It has specialized cells organized into tissues that form several organs. It has specialized cells known as muscle fibers that are excitable by action potentials that allow it to move freely. The male gametes, known as sperm cells, have a single long flagellum. Its embryos develop inside hard shelled eggs. The eggshell color is white. During gastrulation, cells in the embryo migrate through a primitive streak. The fetus is surrounded by the extraembryonic membranes known as amnion, chorion, and allantois. Most of the changes of ontogeny occur inside the egg. It does not undergo metamorphosis. Its chicks are nidicolous. It has 17 body cavities. 9 of these cavities are air sacs. The remaining body cavities are derived from the coelom and include 5 peritoneal cavities, the right pleural cavity, the left pleural cavity, and the pericardial cavity. Its hard bones contain the mineral hydroxyapatite

($Ca_5(PO_4)_3(OH)$). It has a cranium with a mandible. Its heart has 4 chambers. It has a keratinized bill without teeth. It has feathers that allow it to fly. It has a brain inside its skull that is attached to its spinal cord that runs through its backbone. Its appendicular skeleton includes modified anterior limbs that developed into wings to allow flight. Its posterior limbs are short legs with zygodactyl feet that bear long nails; an adaptation to perch and walk on tree branches. It has a tarsometatarsus bone in each leg. It has a well-developed keel bone to provide an attachment site for its strong pectoral muscles that allow flight. It has a synsacrum present. Its circulatory system includes both arteries and veins. Its red blood cells are nucleated. It has lymphoid tissue but lacks lymph nodes. It has kidneys that allow it to get rid of excess of water and toxins. Its sex is determined by sexual chromosomes. Male is the homomorphic sex. Female is the heteromorphic sex. It has lungs to exchange oxygen and carbon dioxide with the atmosphere. It uses oxygen to oxidize carbohydrates to store chemical energy for metabolism. It produces carbon dioxide by transforming pyruvate into acetyl-coenzyme A. It produces further carbon dioxide by the oxidation of isocitrate to α-ketoglutarate and by transforming this molecule to succinyl-coenzyme A in the Krebs Cycle. It has an esophagus with a crop. Its gastrointestinal tract is divided into gizzard and intestines. The gut microbiome has been described for *Ara ararauna* (Linnaeus), but not for this species. Its dark grey bill is not fused to the skull. It is short and curved. The tip of its upper mandible is quite acute. It has a bill tip organ present. Its body measures 0.7 m. It weighs 0.972-1.134 kg. It has a white bare patch on its face that includes the skin surrounding its eyes. The bare patch has a few tiny dark feathers arranged in lines. Its eyes have a yellow iris and a black pupil. Its eyes are supported by a sclerotic ring of bones. Its front has red feathers. The rest of its head has deep green feathers. Its breast and belly have deep green feathers. Its back has deep green feathers. It has some yellowish feathers interspersed between green feathers in its throat. Its wings have sheen green feathers, except the flight feathers that are blue above and yellowish below. The tail feathers are almost as large as the distance from the bill to the uropygial gland. Such tail feathers create a long and deeply acute tail when the bird is resting. However, the tail can open as a narrow fan while preparing for landing. The base of its tail has red feathers. The distal part of its tail has feathers that are blue above and yellowish below. The skin of its feet is pale grey. The complete genome sequence of this species has been sequenced by Hains et al. (2020). You can read about it in "F1000 Research" 9: 1318. Its genome size is 1,177,230,593 BP and its **NCBI accession number** is: GCA_010015965

Diagnosis: *Ara militaris militaris* differs from ***Ara militaris mexicanus* Ridgway, 1915** in size. The bill and feet of adult sexually mature individuals of this subspecies are always larger than those of *Ara militaris militaris*. It differs from ***Ara militaris bolivianus* Reichenow, 1908** in its color. This subspecies has some brown feathers in its throat that reach the upper part of its thorax. This region is green with a few yellowish feathers in the nominate subspecies. It differs from ***Ara ambiguus* (Bechstein, 1811)** in size as this species is larger with a larger bill. Its head is paler green. The blue color of its coverts is paler. The tail is longer. It differs from ***Primolius maracana* (Vieillot, 1816b)** in the size of the frontal band. It is narrower in this species. The top of the head of this species is blue instead of green. It has ventral red feathers instead of green ventral feathers. This species is substantially smaller (0.36-0.43 m). It differs

from ***Ara severus*** **(Linnaeus, 1758)** in its shoulders. The shoulders of this species are red and not wholly green. The front of this species has a chestnut dark color instead of bright red color and such region is narrower than the region with red feathers of *Ara militaris.* This species is smaller. It differs from ***Primolius auricollis*** **(Cassin, 1853)** in the nape, as this species has a yellow nape instead of green. The front is black instead of red. This species is substantially smaller (0.37-0.45 m) It differs from ***Diopsittaca nobilis*** **(Linnaeus, 1758)** in its front, as the front of this species is blue instead of red. Its shoulders are red instead of green. This species is substantially smaller (0.3 m). It differs from ***Ara rubrogenys*** **De Lafresnaye, 1847** in head color as this species has red feathers throughout the top of the head, not just in the front. The shoulders of this species are red and not wholly green. The tail of this species lacks red feathers. This species is smaller. It differs from ***Rhynchopsitta pachyrhyncha*** **(Swainson, 1827b)** in its face. This species lacks a bare facial patch, as it only has a bare eye ring. It lacks blue feathers in its wings and tail. It lacks red feathers in its tail. It has red shoulders instead of wholly green shoulders. This species is substantially smaller (0.38-0.43 m). It differs from ***Rhynchopsitta terrisi*** **Moore, 1947** in its face. This species lacks a bare facial patch, as it only has a bare eye ring. It has a maroon front instead of a red one. It lacks blue feathers in its wings and tail. It lacks red feathers in its tail. It has red shoulders instead of wholly green shoulders. This species is substantially smaller (0.4-0.45 m). It differs from ***Primolius couloni*** **(Sclater, 1876)** in its bare facial patch, as it is gray in this species instead of white. Its head is blue without red feathers. This species is substantially smaller (0.4 m). It differs from ***Orthopsittaca manilatus*** **(Boddaert, 1783)** in its face. This species has a bare facial patch that is yellow instead of white. Its front is blue instead of red. It lacks red feathers in its tail. This species is smaller. It differs from ***Ara ararauna*** **(Linnaeus, 1758)** in its entire body. All the back feathers of this species, including its wings, are blue. It lacks green feathers in its nape, and wings. Its breast and belly have yellow feathers. It lacks green feathers in its breast and belly. This species is larger. It differs from ***Ara autocthones*** **Wetmore, 1937** in its carpometacarpi and tibiotarsi. They were smaller than in *Ara militaris*, but larger than in *Ara rubrogenys*. The color of the feathers of this species is unknown. The total size of this species is unknown. It differs from ***Ara glaucogularis*** **Dabbene, 1921** in its entire body. All the back feathers of this species, including its wings, are blue. It lacks green feathers in its nape, and wings. Its breast and belly have yellow feathers. It lacks green feathers in its breast and belly. This species is larger. It differs from ***Ara chloropterus*** **Gray, 1859** in its entire body. The feathers of the head of this species are wholly red, instead of having a green head with only a red front. Its breast and belly have red feathers. It lacks green feathers in its breast and belly. This species is larger. It differs from ***Ara macao*** **(Linnaeus, 1758)** in its entire body. The feathers of the head of this species are wholly red, instead of having a green head with only a red front. Its breast and belly have red feathers. It lacks green feathers in its breast and belly. This species is larger. It differs from ***Ara tricolor*** **(Bechstein, 1811)** in its entire body. The nape of this species had yellow feathers instead of green ones. Its breast and belly had red feathers. It lacked green feathers in its breast and belly. This species was smaller. By differentiating *Ara militaris militaris* from other taxa, I am fulfilling requirement **75.3.2** of the ICZN. Having fulfilled all the previous requirements, I hereby designate as **NEOTYPE**

of *Psittacus militaris* Linnaeus an adult male skin from Carraipía, El Bosque, Sierra Negra, La Guajira, Colombia, 11.15 N, -72.33 W, 19.VI.1941, *M. A. Carriker 1331* ***USNM*** *368656* (Smithsonian National Museum of Natural History, Washington DC, United States of America). This specimen has all the traits mentioned in the original description and the traits for the nominate subspecies as mentioned in modern works, as it is a feathered skin of an adult bird from Colombia (figure 4).

Figure 4. M. A. Carriker 1331, the neotype of *Ara militaris* (Linnaeus). This specimen is kept at the Smithsonian National Museum of Natural History.

202.Psittacara holochlorus **(Sclater, 1859) (Theropoda: Psittaciformes: Psittacidae) Protonym:** *Conurus holochlorus* Sclater, 1859. **SYNTYPE:** Adult individual from Xalapa, Veracuz, Mexico, *R. Montes de Oca* ***BMNH*** *1890.6.1.35* ***ZOO NHMUK:ecatalogue:*** *3427981* ***barcode:*** *012297549* (Natural History Museum at Tring, Tring, England, United Kingdom).

203.Xiphocolaptes promeropirhynchus **(Lesson, 1840) (Theropoda: Passeriformes Linnaeus, 1766: Furnariidae Gray, 1840) Protonym:** *Dendrocolaptes promeropirhynchus* Lesson, 1840.

204.Cotinga amabilis **Gould, 1857 (Theropoda: Passeriformes: Cotingidae Bonaparte, 1849) SYNTYPES:** Adult female from Verapaz, Guatemala, *G. U. Skinner 73ca61f3-200a-4742-8c45-eaba17a94a7c* ***ZOO NHMUK:ecatalogue:*** *2299373* ***barcode:*** *012304828*. Adult male from Verapaz, Guatemala, *G. U. Skinner 1857.7.30.1* ***ZOO NHMUK:ecatalogue:*** *3433625* ***barcode:*** *012307986*. Adult female from Verapaz, Guatemala, *G. U. Skinner* ***BMNH*** *1857.7.30.2* ***ZOO NHMUK:ecatalogue:*** *3433628* ***barcode:*** *012307987* (Natural History Museum at Tring, Tring, England, United Kingdom).

205.Pitangus sulphuratus **(Linnaeus, 1766) (Theropoda: Passeriformes: Tyrannidae Vigors, 1825) Protonym:** *Lanius sulphuratus* Linnaeus, 1766.

206.Tyrannus melancholicus **Vieillot, 1819 (Theropoda: Passeriformes: Tyrannidae)**

207.Ptiloris victoriae **Gould, 1850 (Theropoda: Passeriformes: Paradisaeidae Swainson, 1825) SYNTYPE:** Adult male from Barnard Islands, Queensland, Australia, *J. MacGillivray* ***BMNH*** *1850.7.20.135* ***ZOO NHMUK:ecatalogue:*** *3433181* ***barcode:*** *012275412* (Natural History Museum at Tring, Tring, England, United Kingdom).

208.Paradisaea raggiana **Sclater, 1873 (Theropoda: Passeriformes: Paradisaeidae) SYNTYPES:** An adult male from Orangerie Bay, Milne Bay Province, Papua New Guinea, *L. M. D'Albertis* ***MZUT Av****6064* (Museo Regionale di Scienze Naturali di Torino, Turin, Piedmont, Italy). An adult from Orangerie Bay, Milne Bay Province, Papua New Guinea, *L. M. D'Albertis* ***C. E.*** *23209* (Museo Civico di Storia Naturale Giacomo Doria, Genoa, Liguria, Italy). **My comments:** Luigi D'Albertis, the naturalist who collected the type specimens of this species, was an unusual man. He behaved like a pirate. During his natural history expeditions, he sexually harassed women, stole goods from the people of the villages that he visited, and was a serial killer of men! The guys that he killed included a member of his own expedition and plenty of people from the villages that he visited. He preserved the head of a man that he killed as a trophy! If you want to know more about this corsair, please read the book by Goode (1977) that is titled "Rape of the Fly: Explorations in New Guinea."

209.Lanius ludovicianus **Linnaeus, 1766 (Theropoda: Passeriformes: Laniidae Rafinesque, 1815)**

210.Cyanocorax formosus **(Swainson, 1827b) (Theropoda: Passeriformes: Corvidae Leach, 1820) Protonym:** *Pica formosa* Swainson, 1827b. **HOLOTYPE:** An adult individual from Temascaltepec, Estado de México, Mexico, *W. Bullock & W. Bullock Jr.* (Egyptian Hall, London, England, United Kingdom). This collection was auctioned according to Swainson

(1827a) in "The Philosophical Magazine: or Annals of chemistry, mathematics, astronomy, natural history, and general science" 2(1): 364–369.

***211.Cyanocorax morio* (Wagler, 1829b) (Theropoda: Passeriformes: Corvidae) Protonym:** *Pica Morio* Wagler, 1829b. **LECTOTYPE:** Designated by Stresemann (1954) in "The Condor" 56: 86–92. It is an individual from Xalapa, Veracruz, Mexico, *F. Deppe*.

212.Cyanocorax dickeyi* Moore, 1935 (Theropoda: Passeriformes: Corvidae) HOLOTYPE:** A male individual from Cerro del Águila, Rancho Batel, 8 km NE from Santa Lucía, La Concordia, Sinaloa, Mexico, *C. C. Lamb* ***MLZ:Bird: *12342* (Moore Laboratory of Zoology, Occidental College, Los Angeles, California, United States of America).

***213.Cyanocitta stelleri* (Gmelin, 1788) (Theropoda: Passeriformes: Corvidae) Protonym:** *Corvus Stelleri* Gmelin, 1788.

214.Aphelocoma woodhouseii* (Baird, 1858) (Theropoda: Passeriformes: Corvidae) Protonym:** *Cyanocitta woodhouseii* Baird, 1858. **LECTOTYPE:** Designated by Ridgway (1904) in "Bulletin of the United States National Museum" 50(3). It is an adult individual from Fort Thorn, Doña Ana, New Mexico, United States of America, *T. C. Henry* ***USNM A *8484*. (Smithsonian National Museum of Natural History, Washington DC, United States of America).

215.Cyanopica cooki* Bonaparte, 1850a (Theropoda: Passeriformes: Corvidae) HOLOTYPE:** Adult individual from the south of Spain, *S. E. Cook* ***BMNH *1855.12.19.404* ***ZOO NHMUK:ecatalogue:*** *3433598* ***barcode:*** *012297924* (Natural History Museum at Tring, Tring, England, United Kingdom).

***216.Nucifraga caryocatactes* (Linnaeus, 1758) (Theropoda: Passeriformes: Corvidae) Protonym:** *Corvus Caryocatactes* Linnaeus, 1758.

***217.Pyrrhocorax pyrrhocorax* (Linnaeus, 1758) (Theropoda: Passeriformes: Corvidae) Protonym:** *Upupa Pyrrhocorax* Linnaeus, 1758. In the original description, Linnaeus cites as syntypes birds from England and Egypt. In modern times, Egypt is not part of the distribution area of *Pyrrhocorax pyrrhocorax*. Linnaeus cites Egypt as part of the area of distribution of *Pyrrhocorax pyrrhocorrax* from the work by Hasselquist (1757) that is titled "Iter Palaestinum, Eller Resa til Heliga Landet, Förrättad Ifrån år 1749 til 1752." The description of the cited bird in such a book could match a juvenile *Pyrrhocorax pyrrhocorax*, as Fredrik Hasselquist states that it is an entirely black bird of the same size as a *Coloeus monedula* (Linnaeus) with a yellow curved bill and yellow legs. However, its ecology and distribution do not match the species that we now know as *Pyrrhocorax pyrrhocorax*. The reason is that it is a migratory bird that is only seen during autumn in the countryside and the villages of the swampy flat lowlands of Lower Egypt. There are different options that could explain this mystery bird. It could be that Hasselquist never saw it, that a local villager told him about it and that the description was wrong. Another option is that the description could have been based on an escaped pet bird such as a *Pyrrhocorax* Tunstall that was caught in another part of the Ottoman Empire. Very unlikely, it could have been a wrongly described non-corvid vagrant bird from exotic lands such

as a male *Eudynamys scolopaceus* (Linnaeus) from Arabia. Even more unlikely, it could have been an undescribed species that is now extinct. This last possibility might seem farfetched but an Egyptian corvid that is strikingly akin to the one described by Hasselquist can be seen in an 18th century alchemical manuscript from Egypt that is a copy of the Medieval treatise titled "Kitab al-Aqalim al-ab'ah" by wizard Al-Simawi. The reference for this manuscript is: British Library MS 25724, ff. 51r-50v. This image was supposedly copied from the books of previous scribes who copied it from an original illustration in a secret book by the most holy Hermes Trismegistus. After finishing his pilgrimage to the Holy Land, Hasselquist died when he was going to travel from Izmir back to Europe. He was 30 years old at that time. It seems that even before travelling to the Levant he was already infected with *Mycobacterium tuberculosis* (Zopf) and had developed the first symptoms of tuberculosis (TB). However, not all ill people die. Some patients heal by themselves without any antibiotics, and especially young people can live for a long time with a chronic disease before meeting their doom, as can be read in the review by Tiemersma et al. (2011) in "PLoS One" 6(4): e17601. It is possible that Hasselquist's death was accelerated by a necromancy curse performed by an undead akh, as according to Linnaeus there were Egyptian mummies in his collection of curiosities. According to an ancient Egyptian legend, wizard Khamwas attempted to steal a magical book from a tomb in the Memphite Necropolis, but the sepulcher was haunted by an akh that scared him, so he did not do that. This story is known as "Setne Khamwas and Naneferkaptah." This event is said to have happened in the very same necropolis where Hasselquist found the mummies. Hasselquist visited such a place approximately 2950 years after Khamwas visited it. As can be known from the old legend, such a place was rumored to be haunted by akhs. If you want to know what happens to the thieves who dare to steal from a tomb haunted by an akh, please read the "Autobiography of Harkhuf." As there are no populations of *Pyrrhocorax pyrrhocorax* living in Egypt, and it is impossible to ascertain the identity of the bird described by Hasselquist, I shall select a lectotype from the other locality mentioned by Linnaeus, England. The English birds are well known and well-studied. Therefore, I hereby designate as **LECTOTYPE** of *Upupa Pyrrhocorax* Linnaeus the adult individual that is labeled as "The Cornish Chough" on plate 24 of the book by Albin (1734) that is titled "A Natural History of Birds illustrated with a hundred and four copper plates, engraven from the life" vol. 2. The lectotype locality is Cornwall, England, United Kingdom. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G. **My comments:** This species is not mentioned in this book.

However, the feathers of an individual of this species can be seen in an illustration. They are the feathers in the headdress of the Neanderthal woman (*Homo neanderthalensis* King) (see **page 435**). This species of corvid was very likely used by Neanderthal people to produce ornaments to embellish themselves. This was suggested by Finlayson et al. (2012) in "PLoS One" 7(9): e45927.

***218. Corvus imparatus* Peters, 1929**
(Theropoda: Passeriformes: Corvidae)
HOLOTYPE: An adult male from Río la Cruz, Tamaulipas, Mexico, *F. B. Armstrong* ***Ornithology*** *49840* (Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, United States of America).

***219. Corvus sinaloae* Davis, 1958**
(Theropoda: Passeriformes: Corvidae)
HOLOTYPE: An adult male from Escuinapa, Sinaloa, Mexico, *J. H. Batty* ***AMNH SKIN*** *71674* (American Museum of Natural History, New York City, New York, United States of America)

***220. Corvus corone* Linnaeus, 1758**
(Theropoda: Passeriformes: Corvidae)

***221. Corvus cornix* Linnaeus, 1758**
(Theropoda: Passeriformes: Corvidae). In the original description, Linnaeus mostly cites syntypes belonging to the nominate subspecies *Corvus cornix cornix* Linnaeus. However, he also cites syntypes belonging to the subspecies that now is known as *Corvus cornix sharpii* Oates. These specimens are cited in the work of Aldrovandi (1599) that is titled: "Vlyssis Aldrovandi philosophi ac medici Bononiensis historiam naturalem in gymnasio Bononiensi profitentis, Ornithologiae, hoc est, De avibus historiae libri XII." When Aldrovandi cites the birds mentioned by Aristotle in his "History of Animals," Aldrovandi is citing specimens of the non-nominate subspecies, as *Corvus cornix sharpii* is the subspecies found in Greece. Aldrovandi also cites the work of Pliny the Elder that is titled "Natural History." Pliny also referred to this subspecies, as it is the one found in mainland Italy. To restrict this name to the nominate subspecies I shall designate a lectotype. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Corvus cornix* Linnaeus the adult specimen depicted in the illustration by Rudbeck Jr. in his "Fogelboken" that is titled: "*Cornix cinerea*" and that has the number "158." written in the right-hand corner. The lectotype locality is Sweden. "Fogelboken" O. Rudbeck Jr. Shelfmark: Leufsta MS 91 (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

222. Corvus corax* Linnaeus, 1758 (Theropoda: Passeriformes: Corvidae)**. Most of the individuals cited by Linnaeus as syntypes in his original description belong to the nominate subspecies *Corvus corax corax* Linnaeus. However, there are also some individuals of the subspecies that we now know as *Corvus corax laurencei* Hume. These individuals are cited in the work of Aldrovandi (1599) that is titled: "Vlyssis Aldrovandi philosophi ac medici Bononiensis historiam naturalem in gymnasio Bononiensi profitentis, Ornithologiae, hoc est, De avibus historiae libri XII." When Aldrovandi cites the work by Aristotle titled "History of Animals," he is certainly referring to individuals of this later subspecies as Aristotle always lived and worked in Macedonia and Athens, eastern Greece, the area that is "haunted" by *Corvus corax laurencei*. To restrict this name to the nominate subspecies *Corvus corax corax*, I shall designate a lectotype. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Corvus corax* Linnaeus the adult specimen depicted in the illustration by Rudbeck Jr. in his "Portföljen" that is titled: "Korp" and that has the number "15." written in the right-hand corner. The lectotype locality is Sweden. "Fogelboken, portföljen" *O. Rudbeck Jr.* ***förvaring i KoB, E *32b* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

***223. Callaeas wilsoni* (Bonaparte, 1850a) (Theropoda: Passeriformes: Callaeidae Sundevall, 1836) Protonym:** *Glaucopis wilsoni* Bonaparte, 1850a. **HOLOTYPE:** An adult from North Island, New Zealand (Academy of Natural Sciences of Philadelphia, Philadelphia, Pennsylvania, United States of America). The Academy is now part of Drexel University. There are three specimens of this species in this collection. However, none of them is catalogued as a type specimen. The holotype may be lost.

***224. Philesturnus rufusater* (Lesson, 1828a) (Theropoda: Passeriformes: Callaeidae) Protonym:** *Icterus rufusater* Lesson, 1828a.

225. Notiomystis cincta* (Du Bus de Gisignies, 1839) (Theropoda: Passeriformes: Notiomystidae Driskell et al. 2007) Protonym:** *Meliphaga cincta* Du Bus de Gisignies, 1839. **SYNTYPES:** An adult male individual from North Island, New Zealand, ***RBINS I.G. number: *632* ***number in collection:*** *6994* ***UUID:*** *ed98cded-9735-40b8-ac8c-af4bf76c7321*. An adult male individual from North Island, New Zealand, ***RBINS I.G. number:*** *9270* ***number in collection:*** *6994B* ***UUID:*** *ee29606c-2b95-484f-bb96-*

6528b3d3b1f3 (Royal Belgian Institute of Natural Sciences, Brussels, Belgium).

***226.Baeolophus wollweberi* (Bonaparte, 1850b) (Theropoda: Passeriformes: Paridae Vigors, 1825) Protonym:** *Lophophanes wollweberi* Bonaparte, 1850b. **HOLOTYPE:** Adult from Zacatecas, Mexico (Hessisches Landesmuseum Darmstadt, Hesse, Germany).

227.Mirafra javanica* Horsfield, 1821 (Theropoda: Passeriformes: Alaudidae Vigors, 1825) HOLOTYPE:** An adult individual from Java, Indonesia, *T. Horsfield* ***BMNH *1880.1.1.4433* ***ZOO NHMUK:ecatalogue:*** *3435920* ***barcode:*** *012454314* (Natural History Museum at Tring, Tring, England, United Kingdom).

228.Galerida theklae* Brehm, 1857 (Theropoda: Passeriformes: Alaudidae) LECTOTYPE:** Designated by E. Hartert (1918) in "Novitates Zoologicae" 27: 425-505. It is an adult male from Játiva, Valencia, Spain, *A. E. Brehm* ***AMNH SKIN *457784* (American Museum of Natural History, New York City, New York, United States of America).

***229.Acrocephalus arundinaceus* (Linnaeus, 1758) (Theropoda: Passeriformes: Acrocephalidae Salvin, 1882) Protonym:** *Turdus arundinaceus* (Linnaeus, 1758)

230.Progne sinaloae* Nelson, 1898 (Theropoda: Passeriformes: Hirundinidae Vigors, 1825) HOLOTYPE:** An adult male from Plomosas, Rosario, Sinaloa, Mexico, *E. W. Nelson & E. A. Goldman* ***USNM *157171* (Smithsonian National Museum of Natural History, Washington DC, United States of America).

***231.Hirundo rustica* Linnaeus, 1758 (Theropoda: Passeriformes: Hirundinidae)**

***232.Phylloscopus proregulus* (Pallas, 1811) (Theropoda: Passeriformes: Phylloscopidae Alström et al. 2006) Protonym:** *Motacilla proregulus* Pallas, 1811.

***233.Sylvia borin* (Boddaert, 1783) (Theropoda: Passeriformes: Sylviidae Vigors, 1825) Protonym:** *Motacilla Borin* Boddaert, 1783.

234.Toxostoma guttatum* (Ridgway, 1885) (Theropoda: Passeriformes: Mimidae Bonaparte, 1853) Protonym:** *Harporhynchus guttatus* Ridgway, 1885. **HOLOTYPE:** An adult male from Cozumel Island, Quintana Roo, Mexico, *J. E. Benedict & T. Lee* ***USNM *102454* (Smithsonian National Museum of Natural History, Washington DC, United States of America). **My comments:** This species is extinct. It became extinct at the beginning of the 21st century.

235.Mimus parvulus* (Gould, 1837b) (Theropoda: Passeriformes: Mimidae) Protonym:** *Orpheus parvulus* Gould, 1837b. **HOLOTYPE:** An adult from Isabela Island, Islas Galápagos, Ecuador, *C. R. Darwin* ***BMNH *1855.12.19.92.* ***ZOO NHMUK:ecatalogue:*** *3433499* ***barcode:*** *012454265* (Natural History Museum at Tring, Tring, England, United Kingdom).

236.Mimus trifasciatus* (Gould, 1837b) (Theropoda: Passeriformes: Mimidae) Protonym:** *Orpheus trifasciatus* Gould, 1837b. **HOLOTYPE:** An adult from Floreana Island, Islas Galápagos, Ecuador, *C. R. Darwin* ***BMNH *1855.12.19.225* ***ZOO NHMUK:ecatalogue:*** *3433550* ***barcode:*** *012454270* (Natural History Museum at Tring, Tring, England, United Kingdom).

***237. Mimus melanotis* (Gould, 1837b) (Theropoda: Passeriformes: Mimidae) Protonym:** *Orpheus melanotis* Gould,

1837b. **SYNTYPE:** An adult from San Cristóbal Island, Islas Galápagos, Ecuador, *C. R. Darwin* ***BMNH*** *1855.12.19.228* ***ZOO NHMUK:ecatalogue:*** *3433556* ***barcode:*** *012454133* (Natural History Museum at Tring, Tring, England, United Kingdom).

238.Mimus polyglottos **(Linnaeus, 1758) (Theropoda: Passeriformes: Mimidae) Protonym:** *Turdus polyglottos* Linnaeus, 1758. In the original description, Linnaeus cites individuals from Jamaica in the work of Hans Sloane and individuals from the East Coast of the United States of America in the works of Mark Catesby and Pehr Kalm. The Jamaican birds belong to the subspecies that we now know as *Mimus polyglottos orpheus* (Linnaeus). The East Coast birds belong to the subspecies that we now know as *Mimus polyglottos polyglottos* (Linnaeus). To provide taxonomic stability I will designate a lectotype. In that way, I will allocate the name *Mimus polyglottos polyglottos* to the populations from the East Coast of the United States of America. The book by Catesby (1731) is named "The Natural History of Carolina, Florida and the Bahama islands" volume 1. That would suggest that the *Mimus polyglottos* that he painted in such a book came from either South Carolina, Florida, or the Bahamas. This would not solve the taxonomic problem as if this bird were from South Carolina or Florida, it would belong to the subspecies *Mimus polyglottos polyglottos*. If it were from the Bahamas, it would belong to the subspecies *Mimus polyglottos orpheus*. However, if we pay attention to the text, it is possible to notice that Catesby provides a locality for his painting and that it is neither South Carolina, Florida nor the Bahamas. He says that the image that he depicted in his book is a bird perched on a tree that we now know as *Cornus florida* Linnaeus. Catesby stated that such a tree is from Virginia. He says he has seen *Mimus polyglottos* in such trees. After the death of his father, Catesby left England and lived in Virginia. Therefore, he was acquainted with the plants and birds of such a place. That is why he added Virginian *Mimus polyglottos* to his paintings of birds. I hereby designate the following **LECTOTYPE** of *Turdus plyglottos* Linnaeus: It is the adult individual depicted on the painting known as "*Turdus minor*. &c. The Mock-bird" on t. 27 of the book by Catesby (1731). Virginia *M. Catesby* ***RL*** *24840* (Royal Library, Windsor Castle, Windsor, England, United Kingdom). Lectotype locality is Virginia, United States of America. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

239.Sialia currucoides **(Bechstein, 1798) (Theropoda: Passeriformes: Turdidae Rafinesque, 1815) Protonym:** *Motacilla* s. *Sylvia currucoides* Bechstein, 1798. **LECTOTYPE:** Designated by Banks & Browning (1995) in "The Auk" 112(3): 633–648. It is an immature individual from Virginia, United States of America (Hessisches Landesmuseum Darmstadt, Darmstadt, Hesse, Germany). The

specimen might be lost but you can see a color illustration of it in the original description. **My comments:** *Sialia currucoides* does not normally live in Virginia. The type specimen is a vagrant bird.

240. Myadestes unicolor* Sclater, 1857 (Theropoda: Passeriformes: Turdidae) HOLOTYPE:** An adult individual from Córdoba, Veracruz, Mexico, *M. A. Sallé* ***no. *150*. I do not know where it is currently found or if it is a lost specimen.

***241. Turdus infuscatus* (De Lafresnaye, 1844) (Theropoda: Passeriformes: Turdidae) Protonym:** *Merula infuscata* De Lafresnaye, 1844 **HOLOTYPE:** An adult from Mexico (Private collection of Frédéric de Lafresnaye, Château de la Fresnaye, Falaise, Calvados, France). Most of this collection is now in Harvard University, but I was unable to find the type specimen.

242. Turdus rufopalliatus* De Lafresnaye, 1840 (Theropoda: Passeriformes: Turdidae) HOLOTYPE:** An adult individual ***MCZ Ornithology *76520* (Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, United States of America).

***243. Luscinia megarhynchos* Brehm, 1831 (Theropoda: Passeriformes: Muscicapidae Vigors, 1825)**

244. Luscinia svecica* (Linnaeus, 1758) (Theropoda: Passeriformes: Muscicapidae) Protonym:** *Motacilla svecica* Linnaeus, 1758. There are plenty of different subspecies of this melodious bird. Linnaeus cites among his syntypes two subspecies. For example, he cites an individual of the subspecies *Luscinia svecica cyanoleuca* (Meisner) from Gibraltar in the work of George Edwards (1743) that is titled: "A natural history of uncommon birds: and of some other rare and undescribed animals, quadrupedes, fishes, reptiles, insects, &c., exhibited in two hundred and ten copper-plates, from designs copied immediately from nature, and curiously coloured after life." He also cites an individual of the subspecies *Luscinia svecica svecica* Linnaeus from his own work on the animals of Sweden. To allocate this name to the populations of the nominate subspecies I shall designate a lectotype. E. Hartert (1910) restricted the type locality to Swedish Lapland in "Die Vögel der paläarktischen Fauna systematische Übersicht der in Europa, Nord-Asien und der Mittelmeerregion vorkommenden Vögel" volume 1. To maintain nomenclatural stability, I have chosen a type specimen from Lapland, Sweden. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Motacilla svecica* Linnaeus the adult male depicted in the illustration by Rudbeck Jr. in his "Fogelboken" that is titled: "Avis Carolina mas" and that has the number "59." written in the right-hand corner. The lectotype locality is Lapland, Sweden. "Fogelboken" *O. Rudbeck Jr.* ***Shelfmark: Leufsta MS *91* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). Olof Rudbeck Jr. was the first ecologist that travelled to Lapland. He recorded plenty of scientific observations from there. I employed the term "lectotype" in the designation according to requirement

74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

***245.Bombycilla garrulus* (Linnaeus, 1758) (Theropoda: Passeriformes: Bombycillidae Swainson, 1831)**

Protonym: *Lanius Garrulus* Linnaeus, 1758. In the original description, Linnaeus includes a syntype of the species that we now know as *Bombycilla garrulus* from his own work on the animals of Sweden. He also includes a syntype belonging to the species that we now know as *Bombycilla cedrorum* Vieillot. This last specimen is depicted on illustration 46 of the book of Mark Catesby (1731) that is named "The Natural History of Carolina, Florida and the Bahama islands" volume 1. To provide nomenclatural stability I shall designate a lectotype. This will allocate this name only to the individuals that belong to the species that we now know as *Bombycilla garrulus*. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Lanius Garrulus* Linnaeus the adult male depicted in the illustration by Rudbeck Jr. in his "Fogelboken" that is titled: "*Garrulus Bohemicus*" and that has the number "90." written in the right-hand corner. The lectotype locality is Sweden. "Fogelboken" *O. Rudbeck Jr.* ***Shelfmark: Leufsta MS*** *91* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

***246.Moho nobilis* (Merrem, 1786) (Theropoda: Passeriformes: Mohoidae Fleischer et al. 2008) Protonym:** *Gracula nobilis* Merrem, 1786. **My comments:** This species is extinct. It became extinct during the last decade of the 19th century.

***247.Passer domesticus* (Linnaeus, 1758) (Theropoda: Passeriformes: Passeridae Rafinesque, 1815)**

Protonym: *Fringilla domestica* Linnaeus, 1758. When I travelled to Naples, Italy from Athens, Greece in 2010 as part of my grand tour and I saw the *Passer* Brisson sparrows living in Naples, I did not find them particularly different from average *Passer domesticus*. Most ornithologists thought the same at that time and assigned them to the species *Passer domesticus*. However, it was found later that the genome of the *Passer* sparrows from Italy is a mosaic between two species: *Passer*

domesticus and *Passer hispaniolensis* (Temminck). This showed that this was a different species and that it had had a hybrid origin according to Hermansen et al. (2011) in "Molecular Ecology" 20: 18: 3812–3822. In the original description of *Passer domesticus*, Linnaeus thought that *Passer italiae* (Vieillot), the Italian hybrid species of *Passer*, was a population of *Passer domesticus*. I know he thought this because he included among his syntypes Italian birds. Linnaeus cites among the syntypes the individuals in the book by Aldrovandi (1600) that is titled "Ornithologiae tomus alter." Aldrovandi cites the sparrows in the work by Aelianus known as "De Natura Animalium." Aelianus was from Palestrina, Italy, so such individuals clearly belong to the species *Passer italiae*. He also cites the pet sparrow of Lesbia, the lover of the famous Roman writer Catullus. This is perhaps the most remarkable and famous of the syntypes, as it is a well-known bird to all classical scholars, but it is also certainly a *Passer italiae*, as Catullus was born in Verona, Italy and lived most of his life in Rome, Italy. Cassiodorus, the Catholic who founded the monastery known as Vivarium is also cited by Aldrovandi. Cassiodorus states in "Expositio Psalmorum" that he saw different species of sparrows with different ecological niches. The sparrows that Cassiodorus observed in his homeland that were more like *Passer domesticus* also belonged to the species *Passer italiae* as he was from Squillace, Italy. Moreover, all the field observations made by Aldrovandi, including the bird in the illustration, would be from birds from Bologna, Italy, also individuals of the species *Passer italiae*. To provide nomenclatural stability I shall designate a lectotype. This will allocate this name only to the individuals that belong to the species that we now know as *Passer domesticus*. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Fringilla domestica* Linnaeus the adult male depicted in the illustration by Rudbeck Jr. in his "Fogelboken" that is titled: "Tetting Gråsparf" and that has the number "79." written in the right-hand corner. The lectotype locality is Sweden. "Fogelboken" *O. Rudbeck Jr.* ***Shelfmark: Leufsta MS*** *91* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G. "Vivamus, mea Lesbia, atque amemus."

248. Haemorhous mexicanus **(Müller, 1776) (Theropoda: Passeriformes: Fringillidae Leach, 1820) Protonym:** *Fringilla Mexicana* Müller, 1776.

249. Serinus canaria **(Linnaeus, 1758) (Theropoda: Passeriformes: Fringillidae) Protonym:** *Fringilla Canaria* Linnaeus, 1758. **My comments:** I

am surprised how this bird has not formed any subspecies even if its populations are spread in three different archipelagos: Madeira, Azores, and Canary Islands. The genetic distances between these populations are very low according to Dietzen et al. (2006) in "Journal of Ornithology" 147(3):485–494.

250. Plectrophenax nivalis* (Linnaeus, 1758) (Theropoda: Passeriformes: Calcariidae Ridgway, 1901) Protonym:** *Emberiza nivalis* Linnaeus, 1758. The Italian naturalist Aldrovandi produced some of his bird books with black and white ink illustrations and some exact copies with color illustrations. The 1600 color edition of his book on birds was published while he was still alive, so the bird colors shown are the ones that he wanted to depict in his specimens. There is a pale adult female of the species *Fringilla coelebs* Linnaeus depicted in an illustration that is titled: "Fringilla albicans cum oxyacantha" on page 818 of the book by Aldrovandi (1600) that is titled: "Ornithologiae tomus alter." The fact that this individual belongs to the species *Fringilla coelebs* can be noticed in the color edition, as she has a dark poll of feathers in her head. She has a spot of a few white feathers in her wings followed by a pale stripe of feathers between dark feathers in her wings. She also has a pale breast and belly and darker upperparts. This individual is not a female *Plectrophenax nivalis* because she does not have white underparts. It is not a juvenile *Plectrophenax nivalis* because she does not have a uniform grey head. When Linnaeus described *Plectrophenax nivalis* as a new species in his 10th edition of the "Systema Naturae," he included plenty of syntypes of the species that we know with that name. However, he also included the adult female depicted by Aldrovandi (1599) in the illustration known as "Fringilla albicans cum oxyacantha." Hence, he also included a female *Fringilla coelebs* among his syntypes. To provide taxonomic stability I shall designate a lectotype. In the original description, Linnaeus cites the first edition of "Fauna Svecica." In that work, Linnaeus (1746) cites the illustrations by Olof Rudbeck the younger. Linnaeus (1746) says on the first page of his preface that he used them to study the species of birds. Therefore, I hereby designate as **LECTOTYPE** of *Emberiza nivalis* Linnaeus the adult individual depicted in the illustration by Rudbeck Jr. in his "Fogelboken" that is titled: "*Passer nivalis*" and that has the number "92." written in the right-hand corner. The lectotype locality is Lapland, as there is a reference to the notes of the Lappland journey of Rudbeck Jr. in the label of the illustration. "Fogelboken" *O. Rudbeck Jr.* ***Shelfmark: Leufsta MS *91* (Uppsala Universitetsbibliotek Carolina Rediviva, Uppsala Universitet, Uppsala, Sweden). Olof Rudbeck Jr. was the first ecologist that travelled to Lapland. He recorded plenty of scientific observations from there. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic

purpose of the designation according to recommendation 74G.

***251. Emberiza pusilla* Pallas, 1776 (Theropoda: Passeriformes: Emberizidae Vigors, 1825)**

***252. Melospiza melodia* (Wilson, 1810) (Theropoda: Passeriformes: Passerellidae Cabanis, 1851) Protonym:** *Fringilla melodia* Wilson, 1810.

***253. Psarocolius decumanus* (Pallas, 1769) (Theropoda: Passeriformes: Icteridae Vigors, 1825) Protonym:** *Xanthornvs decvmanvs* Pallas, 1769. **My comments:** This species is not mentioned in the text of this book. However, the feathers of several individuals of this species can be seen in two illustrations. They are the feathers in the headdresses of the young women that are depicted as allegories of the Americas (see **pages 2 & 55**). The featherwork of some Indigenous Peoples from South America includes feathers of this species. This can be read in the book by Jaimes Betancourt (2015) that is titled "El Poder de las Plumas: colección de arte plumario del Museo Nacional de Etnografía y Folklore, según la cadena de producción."

254. Agelaius phoeniceus* (Linnaeus, 1766) (Theropoda: Passeriformes: Icteridae) Protonym:** *Oriolus phoeniceus* Linnaeus, 1766. **LECTOTYPE:** Designated by Howell & Van Rossem (1928) in "The Auk" 45(2): 155–163. It is the adult individual on plate 13 of the book by Mark Catesby (1731) that is titled "The Natural History of Carolina, Florida and the Bahama islands" volume 1. South Carolina, *M. Catesby* ***RL *24826* (Royal Library, Windsor Castle, Windsor, England, United Kingdom).

***255. Molothrus aeneus* (Wagler, 1829b) (Theropoda: Passeriformes: Icteridae) Protonym:** *Psarocolius aeneus* Wagler, 1829b. **HOLOTYPE:** Adult individual from Laguna, Veracruz, Mexico (Museum für Naturkunde, Berlin, Germany). This specimen might be lost.

***256. Molothrus ater* (Boddaert, 1783) (Theropoda: Passeriformes: Icteridae) Protonym:** *Oriolus ater* Boddaert, 1783. In the original description, Boddaert cites syntypes of the species that we now know as *Molothrus ater* in the works of John Latham and the Count of Buffon. He also cites syntypes of the species that we now know as *Quiscalus niger* (Boddaert) from the book of Mathurin Jacques Brisson (1760) that is titled: "Ornithologie, ou, Méthode contenant la division des oiseaux en ordres, sections, genres, especes & leurs variétés" Volume 2. This is extremely weird and unusual. Boddaert just described *Quiscalus niger* as a new species six pages before, using the Jamaican specimens of Brisson as syntypes! He used the same syntypes in the same book to describe two different species! To provide nomenclatural stability I shall designate a lectotype. I hereby designate as **LECTOTYPE** of *Oriolus ater* Boddaert the adult male individual labeled as "1. Troupiale de la Caroline" on plate 606 of the "Planches enluminées d'histoire naturelle." This illustration was commissioned by the Count of Buffon (1775) for his "Histoire naturelle des oiseaux" volume 5. The lectotype locality is South Carolina, United States of America. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I

maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

257.Quiscalus mexicanus **(Gmelin, 1788) (Theropoda: Passeriformes: Icteridae) Protonym:** *Corvus mexicanus* Gmelin, 1788.

258.Seiurus aurocapilla **(Linnaeus, 1766) (Theropoda: Passeriformes: Parulidae Wetmore et al. 1947) Protonym:** *Motacilla aurocapilla* Linnaeus, 1766

259.Parkesia motacilla **(Vieillot, 1809) (Theropoda: Passeriformes: Parulidae) Protonym:** *Turdus motacilla* Vieillot, 1809. **HOLOTYPE:** An adult individual from Kentucky, United States of America in the private collection of Louis Jean Pierre Vieillot. I was unable to find it. It might be lost. However, you can still see it in an illustration in the original description.

260.Parkesia noveboracensis **(Gmelin, 1789) (Theropoda: Passeriformes: Parulidae) Protonym:** *Motacilla noveboracensis* Gmelin, 1789.

261.Cardellina rubrifrons **(Giraud, 1841) (Theropoda: Passeriformes: Parulidae) Protonym:** *Muscicapa rubrifrons* Giraud, 1841. **HOLOTYPE:** An adult individual, ***USNM*** *47693* (Smithsonian National Museum of Natural History, Washington DC, United States of America).

262.Cardellina rubra **(Swainson, 1827a) (Theropoda: Passeriformes: Parulidae) Protonym:** *Setophaga rubra* Swainson, 1827a. **SYNTYPE:** An adult individual from the mountains of Central Mexico, *W. Bullock & W. Bullock Jr.* ***UMZC*** *27/Paru/7/a/1,2* (Cambridge University Museum of Zoology, Cambridge, England, United Kingdom).

263.Piranga erythrocephala **(Swainson, 1827b) (Theropoda: Passeriformes: Cardinalidae Ridgway, 1901) Protonym:** *Spermagra erythrocephala* Swainson, 1827b. **SYNTYPE:** An adult male from Temascaltepec, Estado de México, Mexico, *W. Bullock & W. Bullock Jr.* ***UMZC*** *27/Thr/43/b/1* (Cambridge University Museum of Zoology, Cambridge, England, United Kingdom).

264.Cardinalis cardinalis **(Linnaeus, 1758) (Theropoda: Passeriformes: Cardinalidae) Protonym:** *Loxia Cardinalis* Linnaeus, 1758. In the original description there are several syntypes cited. One of them is a red cockatoo or parrot. It may be a species of the family Psittaculidae Vigors that belongs to the genus *Pseudeos* Peters or *Eos* Wagler. It could also be an extinct species of cockatoo or parrot. This bird was able to imitate the human voice. It was supposed to have lived in Indonesia. This specimen was found in the Albertus Seba Museum and is illustrated on tab LX of the book by Albertus Seba (1734) titled: "Locupletissimi rerum naturalium thesauri accurata descriptio, et iconibus artificiosissimis expressio, per universam physices historiam" volume 1. Such an illustration is inaccurate. The text describes a cockatoo or a parrot, but the bird in the illustration has anisodactyl feet instead of zygodactyl feet. Such a mistake confused Linnaeus. That is why he thought that the illustration depicted a passerine. All the other syntypes belong to the species now known as *Cardinalis cardinalis* (Linnaeus). However, it is not possible to ascertain the origin of all such syntypes. The origin is important to know their subspecies. The

bird described by Aldrovandi was a cage bird that arrived in Europe from the Cape Verde Islands. The bird described by James Petiver was a cage bird that arrived in Europe from South Africa. It is thus impossible to know their wild origin. It is quite certain that the bird of Aldrovandi was Mexican, as what is now the United States of America had an extremely low population of European people during the 16th century. Knowing that it was a Mexican bird is not helpful, as there are 15 different subspecies of *Cardinalis cardinalis* in Mexico. Nevertheless, many of them live in places that were almost inaccessible for Spanish expats during the 16th century, so it is likely it belonged to 7 possible subspecies. It is even more difficult to determine the subspecies of *Cardinalis cardinalis* described by James Petiver as during the 17th century, the Europeans populated more places in North America, so it is almost impossible to ascertain the wild origin of such a bird. The syntypes in the works of John Ray and Mark Catesby are certainly what we now know as *Cardinalis cardinalis cardinalis* (Linnaeus). This taxonomic problem justifies designating a lectotype. The traditional type locality is South Carolina, United States of America, as can be read in the book by Stone et al. (1931) that is named: "Check-list of North-American Birds" 4th edition that was published by the American Ornithologists' Union. They almost designated a lectotype. However, in their entry on *Richmondéna cardinalis cardinalis* (Linnaeus) they said: "Based mainly in the Red-Bird, *Coccothraustes ruber* Catesby, Carolina, I, 38." By stating the word "mainly" they failed to exclude the bird in such book from the other syntypes, so it cannot be considered a valid designation according to article 74.5 of the ICZN. I think this species should be wholly based on the bird by Mark Catesby (1731) in his book that is titled "The Natural History of Carolina, Florida and the Bahama islands" volume 1. Thus, I hereby designate as **LECTOTYPE** of *Loxia Cardinalis* Linnaeus the adult male individual on the illustration titled: "*Coccothraustes ruber*. The red bird." This illustration has the number "T. 38." It is found in the book by Catesby (1731). South Carolina *M. Catesby* ***RL*** *24852* (Royal Library, Windsor Castle, Windsor, England, United Kingdom). Lectotype locality is South Carolina, United States of America. This individual is not from Florida. I know this because its back and wing feathers do not have olivaceous terminal margins as in birds of the subspecies *Cardinalis cardinalis floridanus* Rigdway. The margins look dark grey in the wing feathers of the illustration. I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

265. Pheucticus chrysopeplus **(Vigors, 1832) (Theropoda: Passeriformes: Cardinalidae). Protonym:** *Coccothraustes chrysopeplus* Vigors, 1832.

266.Passerina cyanea* (Linnaeus, 1766) (Theropoda: Passeriformes: Cardinalidae) Protonym:** *Tanagra cyanea* Linnaeus, 1766. In the original description of this species, Linnaeus cites individuals that would be now considered as 2 different species. One of these species is what we now know as *Passerina ciris* (Linnaeus). He cites a male and a female of this species that are depicted on illustration 237 of the book by George Edwards (1760) that is titled "Gleanings of natural history: exhibiting figures of quadrupeds, birds, insects, plants &c." Part 2. Linnaeus also cites the corresponding description of this plate on page 132 of the same work. To maintain nomenclatural stability, I shall designate a lectotype for *Passerina cyanea* (Linnaeus). I hereby designate as **LECTOTYPE** of *Tanagra cyanea* Linnaeus the adult male individual on the illustration titled: "*Linaria caerulea*. The Blew Linnet." This illustration has the number "T. 45." It is found in the book by Catesby (1731) that is titled "The Natural History of Carolina, Florida and the Bahama islands" volume 1. South Carolina *M. Catesby* ***RL *25887* (Royal Library, Windsor Castle, Windsor, England, United Kingdom). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

***267.Passerina leclancherii* De Lafresnaye, 1840 (Theropoda: Passeriformes: Cardinalidae) SYNTYPES:** two adult individuals from Acapulco, Guerrero, Mexico, *M. Leclancher*. (Private collection of Frédéric de Lafresnaye, Château de la Fresnaye, Falaise, Calvados, France). Most of this collection is now in Harvard University, but I was unable to find the type specimens.

***268.Passerina ciris* (Linnaeus, 1758) (Theropoda: Passeriformes: Cardinalidae) Protonym:** *Emberiza Ciris* Linnaeus, 1758. In the original description, Linnaeus included syntypes of two different species. One of such specimens belongs to the species that we now know as *Passerina cyanea* (Linnaeus). It is a bird illustrated on plate 45 of the book by Mark Catesby (1731) that is titled "The Natural History of Carolina, Florida and the Bahama islands" volume 1. There are also several syntypes of the species that we now know as *Passerina ciris* (Linnaeus). To maintain nomenclatural stability, I shall select a lectotype. The traditional type locality is South Carolina, United States of America, as can be read in the book by Stone et al. (1931) that is named: "Check-list of North-American Birds" 4th edition that was published by the American Ornithologists' Union. They almost designated a lectotype. However, in their entry on *Passerina ciris* (Linnaeus) they said: "Based mainly in the Painted Finch, *Fringilla tricolor* Catesby, Carolina, I, 44." By stating the word "mainly" they failed to exclude the bird in such text from the other syntypes, so it cannot be considered a valid designation according to article 74.5 of the ICZN.

Thus, I hereby designate as **LECTOTYPE** of *Emberiza Ciris* Linnaeus the adult male individual on the illustration titled: "Avis tricolor. The Painted Finch." This illustration has the number "T. 44." It is found in the book by Catesby (1731). South Carolina *M. Catesby* ***RL*** *25875* (Royal Library, Windsor Castle, Windsor, England, United Kingdom). I employed the term "lectotype" in the designation according to requirement 74.7.1 of the ICZN. I provide information to distinguish this illustration according to requirement 74.7.2 of the ICZN. I stated that "I designated the specimen as lectotype" to fulfill requirement 74.7.3. I maintained the traditional restriction of this name according to recommendation 74A of the ICZN. I chose an illustrated specimen according to recommendation 74B. I included premises for the taxonomic purpose of the designation according to recommendation 74G.

269. Geospiza fuliginosa **Gould, 1837a (Theropoda: Passeriformes: Thraupidae Cabanis, 1847) SYNTYPE:** A male adult from San Cristóbal Island, Islas Galápagos, Ecuador, *C. R. Darwin* ***BMNH*** *1855.12.19.44* ***ZOO NHMUK:ecatalogue:*** *3433442* ***barcode:*** *012454260* (Natural History Museum at Tring, Tring, England, United Kingdom).

270. Geospiza difficilis **Sharpe, 1888 (Theropoda: Passeriformes: Thraupidae) SYNTYPE:** An adult male from Pinta Island, Islas Glápagos, Ecuador, *A. Habel* ***BMNH*** *1885.12.14.321* ***ZOO NHMUK:ecatalogue:*** *3437558* ***barcode:*** *012454436* (Natural History Museum at Tring, Tring, England, United Kingdom).

271. Geospiza fortis **Gould, 1837a (Theropoda: Passeriformes: Thraupidae) SYNTYPE:** An adult female from Santa María Island, Islas Galápagos, Ecuador, *C. R. Darwin* ***BMNH*** *1855.12.19.82* ***ZOO NHMUK:ecatalogue:*** *3433496* ***barcode:*** *012454264* (Natural History Museum at Tring, Tring, England, United Kingdom).

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***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)**

Illustration made by Kasia (kiko-sempai). © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 846.**

Appendix I: Classification of Non-Bacterial Cellular Organisms Known in 2025

ZooBank LSID: urn:lsid:zoobank.org:pub:D0175613-7A77-4DB2-913B-43BD737932D2

P=Prokaryotes E=Eukaryotes

Altiarchaeota (for example '*Candidatus* Altiarchaeum hamiconexum') P

Iainarchaeota (for example '*Candidatus* Iainarchaeum andersonii') P

B1Sed10-29 P

Micrarchaeota (for example '*Candidatus* Mancarchaeum acidiphilum') P

SpSt-1190 P

Undinarchaeota (for example '*Candidatus* Undinarchaeum marinum') P

EX4484-52 P

Nanohaloarchaeota (for example '*Candidatus* Nanohalobium constans') P

Aenigmarchaeota (for example '*Candidatus* Aenigmatarchaeum subterraneum') P

Huberarchaeota (for example '*Candidatus* Huberarchaeum crystalense') P

‘*Ca.* Altiarchaeum hamiconexum’ Probst et al., 2014 (‘*Ca.* Altiarchaeales:’ ‘*Ca.* Altiarchaeaceae’)

Illustration made by Peregrinus Hierusalemsis. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 868.**

Nanobdellota (for example *Nanobdella aerobiophila*) P

Methanobacteriota_A (for example *Methanococcus maripaludis*) P

Hadarchaeota (for example *Hadarchaeum yellowstonense*) P

Methanobacteriota_B (for example *Pyrococcus furiosus*) P

JACRDV01 P

Hydrothermarchaeota (for example *Hydrothermarchaeum profundi*) P

Methanobacteriota (for example *Methanobrevibacter smithii*) P

Thermoplasmatota (for example *Thermoplasma acidophilum*) P

Halobacteriota (for example *Halobacterium salinarum*) P

Korarchaeota (for example '*Candidatus* Korarchaeum cryptofilum') P

Thermoproteota (for example *Thermoproteus tenax*) P

Atabeyarchaeia (for example *Atabeyarchaeum deiterrae*) P

Jordarchaeia (for example *Freyarchaeum deiteterre*) P

Odinarchaeia (for example '*Candidatus* Odinarchaeum yellowstonii') P

Baldrarchaeia (for example '*Candidatus* Baldrarchaeum yapensis') P

Hermodarchaeia (for example '*Candidatus* Hermodarchaeum yapensis') P

Asgardarchaeia (for example *Asgardarchaeum abyssi*) P

Thorarchaeia P

Lokiarchaeia (for example '*Candidatus* Sigynarchaeum springense') P

Sifarchaeia (for example '*Candidatus* Borrarchaeum marinoarchaea') P

Wukongarchaeia (for example '*Candidatus* Wukongarcaeum yapensis') P

Njordarchaeia (for example '*Candidatus* Njordarchaeum guaymaensis') P

Heimdallarchaeales (for example '*Candidatus* Kariarchaeum pelagium') P

Hodarchaeales (for example '*Candidatus* Hodarchaeum mangrovi') P

Anaeramoebidae (for example *Anaeramoeba flamelloides*) E

Parabasalia (for example *Dientoamoeba fragilis*) E

Preaxostyla (for example *Trimastix marina*) E

Fornicata (for example *Giardia muris*) E

Jakobea (for example *Jakoba libera*) E

Tsukubea (for example *Tsukubamonas globosa*) E

Percolozoa (for example *Naegleria gruberi*) E

Euglenozoa (for example *Trypanosoma brucei*) E

Cryptista (for example *Cryptomonas ovata*) E

Picozoa (for example *Picomonas judraskeda*) E

Rhodelphida (for example *Rhodelphis marinus*) E

Rhodophyta (for example *Porphyra yezoensis*, the nori seaweed) E

Glaucophyta (for example *Glaucocystis nostochinearum*) E

Prasinodermophyta (for example *Prasinococcus capsulatus*) E

Chlorophyta (for example *Ulva lactuca*, the sea lettuce seaweed) E

Mesostigmatophyceae (for example *Mesostigma viride*) E

Klebsormidiophyceae (for example *Klebsormidium flaccidum*) E

Charophyceae (for example *Chara vulgaris*, the common stonewort alga) E

Coleochaetophyceae (for example *Coleochaete nitellarum*) E

Zygnematophyceae sensu stricto (for example *Spirogyra porticalis*) E

Embryophyta (for example *Helianthus annuus*, the common sunflower) E

Hemimastigophora (for example *Paramastix truncata*) E

Provora (for example *Ancoracysta twista*) E

Haptista (for example *Tisochrysis lutea*) E

Telonemia (for example *Telonema subtile*) E

Cercozoa (for example *Cryptochlora perforans*) E

Retaria (for example *Globigerinita glutinata*) E

Ciliophora (for example *Paramecium caudatum*) E

Colponemidia (for example *Colponema loxodes*) E

Acavomonidia (for example *Acavomonas peruviana*) E

Dinozoa (for example *Noctiluca scintillans*) E

Apicomplexa (for example *Plasmodium vivax*) E

Platysulcea (for example *Platysulcus tardus*) E

Sagenista (for example *Cafeteria roenbergensis*) E

Opalozoa (for example *Opalina ranarum*) E

Kaonashiidae (for example *Kaonashia insperata*) E

Bigyromonada (for example *Pirsonia guinardiae*) E

Pseudofungi (for example *Phytophthora infestans*) E

Actinophryida (for example *Heliorapha azurina*) E

Chrysista (for example *Saccharina japonica*, the ma kombu seaweed) E

Diatomista (for example *Phaeodactylum tricornutum*) E

Ancyromonadida (for example *Ancyromonas contorta*) E

Malawimonadida (for example *Malawimonas jakobiformis*) E

CRuMS (for example *Collodictyon triciliatum*) E

Amoebozoa (for example *Reticularia lycoperdon*, the false puffball) E

Breviatea (for example *Breviata anathema*) E

Apusomonadida (for example *Apusomonas proboscidea*) E

Cristidiscoidea (for example *Nuclearia delicatula*) E

Fungi (for example *Amanita muscaria*, the fly agaric mushroom) E

Tunicaraptoridae fam. nov. (for example *Tunicaraptor unikontum*) E

Pluriformea (for example *Corallochytrium limacisporum*) E

Ichthyosporea (for example *Amoebidium parasiticum*) E

Filasterea (for example *Ministeria vibrans*) E

Choanoflagellata (for example *Diaphanoeca grandis*) E

Animalia (for example *Equus quagga*, the plains zebra) E

New Taxa

While compiling the checklist of clades of the Clade Eukaryota, I found an unnamed clade. According to Liu et al. 2024, this is the sister clade to all other holozoans. I shall name it now.

ISBN 979-8-89283-269-4

Published: Saturday the 21st of June 2025 Anno Domini

Systematics

Holozoa Lang et al., 2002

Tunicaraptorea Hierusalemsis, class. nov.

Tunicaraptorida Hierusalemsis, ord. nov.

TUNICARAPTORIDAE Hierusalemsis, fam. nov.

ZooBank LSID: urn:lsid:zoobank.org:act:F5FBF02B-C145-4B21-BFE6-9D3A76BF4412

This book was simultaneously published as a hardcover and as an online PDF/A. New Scientific names fulfill the ICZN requirements for both printed books and electronic documents.

Type genus: *Tunicaraptor* Tikhonenkov et al. 2020

Description: Extremely primitive and basal holozoans. Unicellular organisms. They lack cell walls. They do not have photosynthesizing organelles. Genome is DNA kept inside cell nucleus. Reproduction is mitosis. Mitochondria present. Mitochondria have flat cristae. The cells are motile thanks to a posterior flagellum. Number of flagella, one. Flagellum is made up of cytosol surrounded by plasma membrane. It has two singlet microtubules surrounded by nine doublet microtubules. Organisms are covered by a theca with long hairs. They can have filopodia. At the opposite side of the flagellum there is a mouth that is used by the cell to perform phagocytosis while hunting. Mouth does not have a theca. There is a vacuole under the plasma membrane of the mouth. Vacuole and anterior part of cell full of microtubules and

microfilaments. Golgi cistern underlining kinetosome and centriole. Cell morphology changes due to phagocytosis. Feeding apparatus at posterior end of cells. It is surrounded by plenty of microtubules.

Diagnosis: It differs from **Pluriformea Hehenberger et al. 2017** in being cells surrounded by a theca that is not present in an anterior mouth. It differs from **Ichthyosporea Cavalier-Smith, 1998** in not being spherical cells and in not becoming multinucleate coenocytes. It differs from **Filasterea Salchian-Tabrizi et al. 2008** in being cells surrounded by a theca that is not present in an anterior mouth. It differs from **Choanoflagellata Saville-Kent, 1880** in not having a ring of patent microvilli surrounding the base of its flagellum. It differs from **Animalia Linnaeus, 1758** in not being multicellular.

References for description of new taxa

Cavalier-Smith T (1998) Neomonada and the origin of animals and fungi. In: Coombs GH et al. (eds.) *Evolutionary Relationships Among Protozoa*. pp 375-407. London: Kluwer

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Lang BF, O'Kelly C, Nerad T, Gray MW, & Burger G (2002) The closest unicellular relatives of animals. *Current Biology* **12(20):** 1773–1778

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Liu H, Steenwyk JL, Zhou X, Schultz DT, Kocot KM, Shen XX, Rokas A, & Li Y (2024) A taxon-rich and genome-scale phylogeny of Opisthokonta. *PLoS Bioloy* **22(9):** e3002794

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Glossary, List of Illustrations, and Index

“Wow Peregrinus,

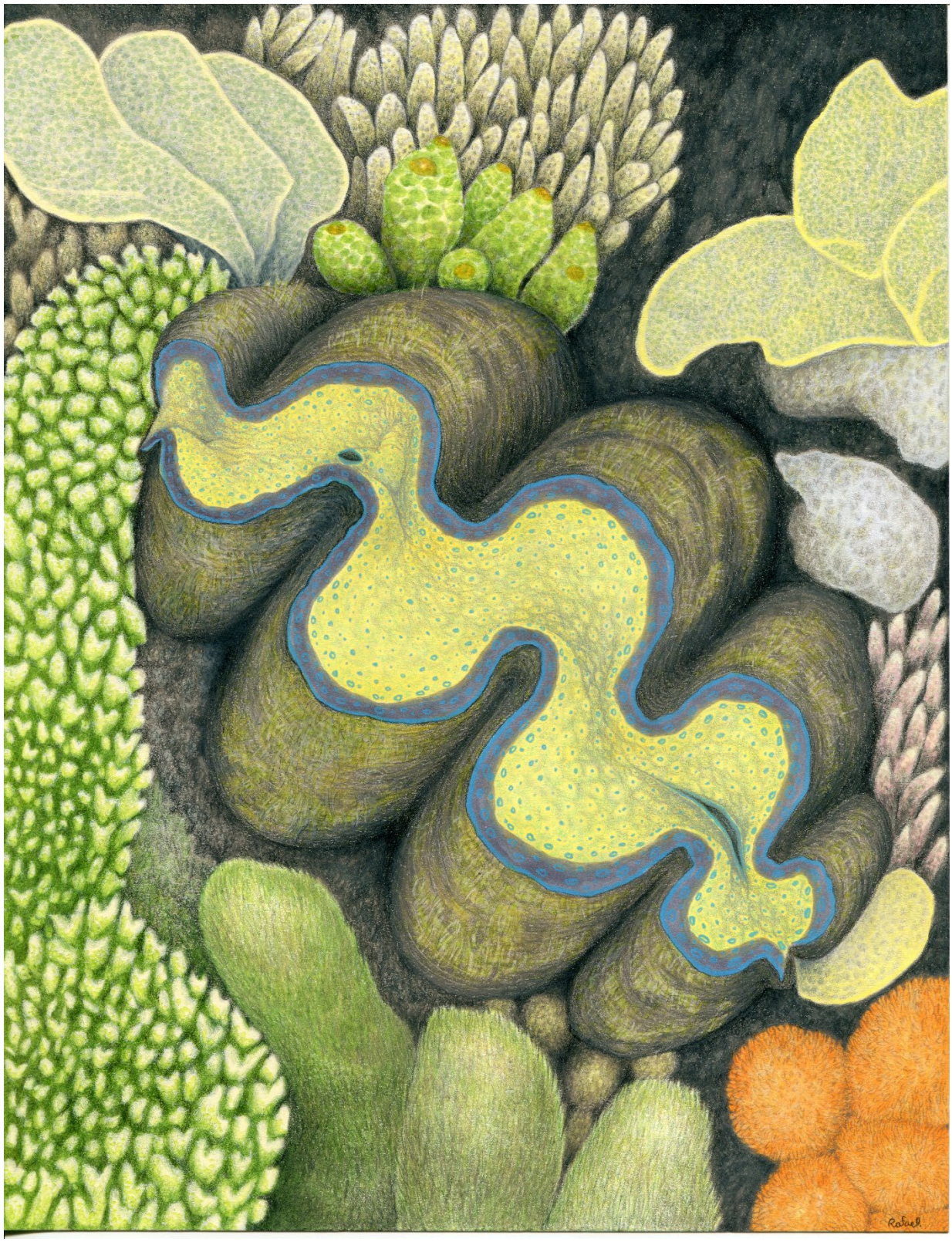
This sounds awesome… I’ve checked some of the animals you listed since I’d never heard of them before. They look really interesting…

To me this year’s animal kingdom exploration looks like the trip of your life so far…

You really inspire me with your passion Peregrinus. To travel so far and see all these amazing species… That we do not see normally around our households…

…Wow again… ”

—Asia the Mystic writing about my journeys to Svalbard, Chile, and Australia that I made in 2011



***Tridacna gigas* (Linnaeus, 1758) (Cardiida: Cardiidae)**

Illustration made by Rafael Calderón. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 869.**

Portrait of Asia the Mystic

Illustration made by Dorina Neméskeri. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 869.**

***Macrochelys temminckii* (Troost, 1835) (Testudines: Chelydridae)**

Illustration made by Camus Altamirano. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 869.**

Taxonomic glossary of scientific names of organisms

Throughout this book, there are several scientific names of organisms. In this glossary I shall explain some rules of nomenclature. All the examples appear in the book, including in the indexes.

Candidatus

The word "*Candidatus*" in names that are not written with italics is not a genus. It simply means that such species of prokaryote has not been sent to type culture collections, so it cannot be formally named according to the rules of the "International Code of Nomenclature of Prokaryotes." It can also mean that its genome has not been validated according to the rules of the "SeqCode." E.g., '*Candidatus* Hodarchaeum mangrovi' Liu et al. 2021 (Hodarchaeales: Hodarchaeacea), one of the closest prokaryotic relatives of eukaryotes, has not been cultured, and its genome has not been validated following the rules of the "SeqCode."

Ex

When a person proposes a new name, but it is not validly published according to the "International Code of Nomenclature for Algae, Fungi, and Plants" or to the "International Code of Zoological Nomenclature" and later the name is validly published in the work of another author, the word "ex" is placed between the name of both authors. E.g., the townsfolk of Omitlán, Hidalgo, Mexico, told to Carl Ehrenberg that the species of *Pinus* Linnaeus, 1753 (Pinales: Pinaceae) that he collected in 1837 was named ayacahuite. Ehrenberg told this fact to Dietrich von Schlechtendal who understood it as Ehrenberg proposing the name "ayacahuite" for the newly found species. Therefore, the species is now cited as *Pinus ayacahuite* Ehrenberg ex Von Schlechtendal, 1838.

Incertae sedis

The words "**Incertae Sedis**" are used to show that there is no way to know to what higher taxon belongs the species that is being cited. E.g., *Megophias monstrosus* Rafinesque, 1819 **nom. inval.** (**Incertae Sedis**) does not exist. Hence, it is impossible to know anything about its evolutionary relationships with respect to other organisms.

Nom. inval.

Every time that after a species name the words "**nomen invalidum**" are used, such species is not validly published according to the "International Code of Nomenclature for Algae, Fungi, and Plants" or to the "International Code of Zoological Nomenclature." E.g., *Nessiteras rhombopteryx* Scott & Rines, 1975 **nom. inval.** (**Incertae Sedis**) is a character from mythology whose

Witch

Illustration made by Kenneth Day. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 869.**

existence is just a hypothesis to attempt to explain certain anomalous events that are allegedly paranormal in origin that occur in Loch Ness, Scotland, United Kingdom. Therefore, the description of such species does not fulfill the requirements to describe a new species of organism of the "International Code of Zoological Nomenclature," because it is not possible to publish scientific names for mythological creatures.

Nomen dubium

These words mean that it is not certain what species is meant by a given scientific name. E.g., *Psittacus rufirostris* Linnaeus, 1758 **nomen dubium** (Psittaciformes: Psittacidae). Linnaeus based this species in texts that describe different species of parrots. Afterward, Linnaeus kept using this name to refer to different species. A lectotype was never designated to apply this name to just one species, so no one uses such name anymore.

Brackets

When the name of an author of a taxon is found between brackets it is meant that the specific epithet is found in a different combination to the originally published combination of genus and species. E.g., Linnaeus described a new species of lepidopteran that he named *Phalaena odorata* Linnaeus, 1758. Afterward, Jacob Hübner (1809) suggested the new combination *Ascalapha odorata* (Linnaeus, 1758) (Lepidoptera: Erebidae).

Spp.

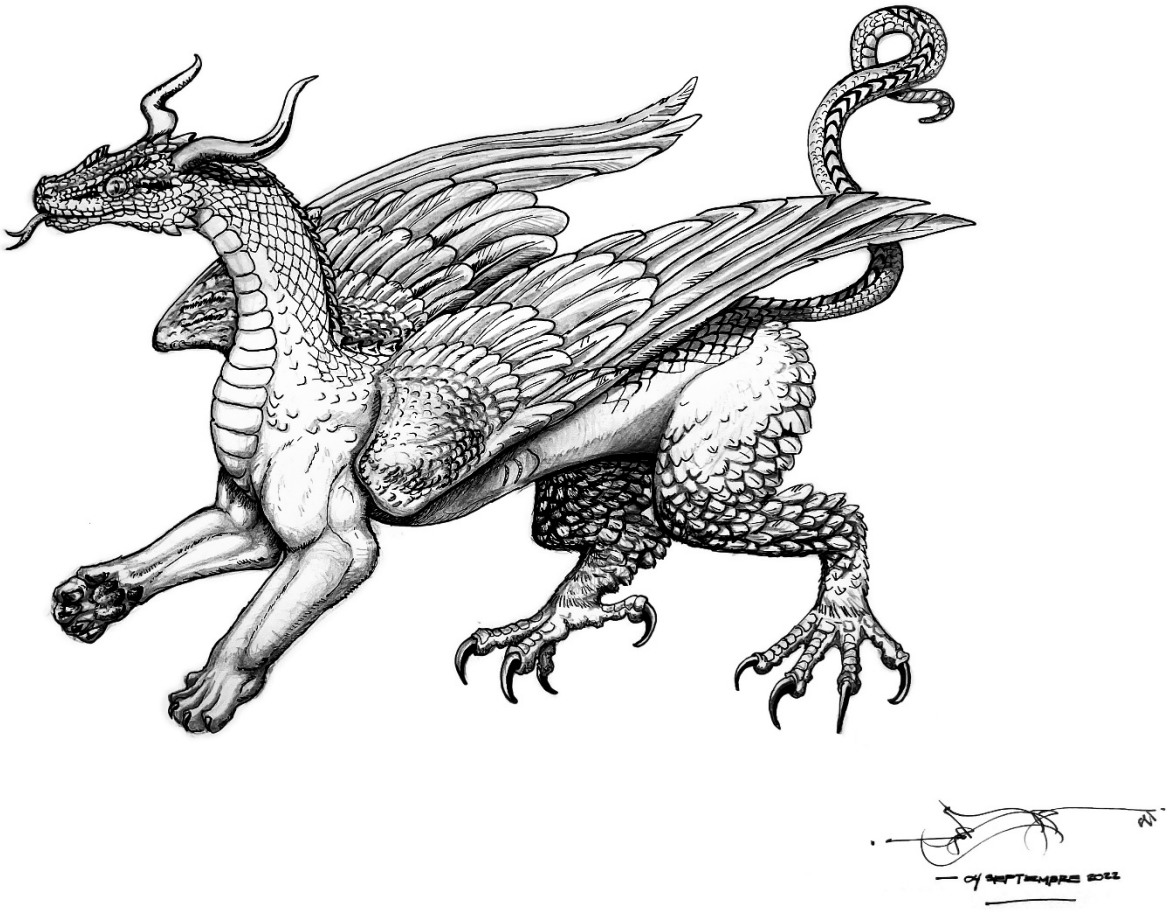
The abbreviation "spp." is the plural of species. It is written after the name of a genus to show that several species of that genus are being referred in the text. E.g., There are at least 3 species of the genus *Eubalaena* Gray, 1864 (Artiodactyla: Balaenidae). When I write in my book about the whales of the genus *Eubalaena* as a likely source of legends of sea monsters, I write the scientific name as *Eubalaena* spp. as it is not just a single species of mammal, but several of them.

X

When a letter "x" is written between the name of a genus and a specific epithet, such name is used to refer to a hybrid whose origin comes from 2 different species within the same genus. There are also hybrids of species that belong to different genera, but no such hybrid species is cited in this book. E.g., the banana species *Musa balbisiana* Colla, 1820 (Zingiberales: Musaceae) and *Musa acuminata* Colla, 1820 were crossed and an economically important hybrid species was produced. Such hybrid is known as *Musa* x *paradisiaca* Linnaeus, 1753.

Hort.

The word "hort." is an abbreviation for the word "hortulanus." When this word is cited as an author's name after a plant species, it means that such plant species is grown by gardeners and called by them with the given binomial name. E.g., *Yucca guatemalensis* hort. ex Baker (Asparagales: Asparagaceae) was a plant kept by gardeners in Europe. Before it was described, it was already common in greenhouses and its name was used by horticulturalists.



Western Dragon

Illustration made by Alan Monroy Ojeda. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 870.**

LIST OF ILLUSTRATIONS

Cover

Shield of Peregrinus Hierusalemsis (2024). **Page 1.** Handmade by **Kasia Burzmińska (kiko-sempai)**. Traditional art made with watercolors. 29.6 x 20.5 cm. Private Collection.

Illustration at the end of chapters

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)** (2024). **Pages 43, 121, 141, 203, 241, 299, 345, 433, 485, 535, 567, 621, 657, 671, 675, 715, & 829.** Handmade by **Kasia Burzmińska (kiko-sempai)**. Traditional art made with watercolors. 29.6 x 21 cm. Private Collection. **Note 1:** This is my symbol. This plant is my heraldic supporter in my coat of arms. You can see my coat of arms on **page 4.** **Note 2:** Pre-Socratic philosopher Pythagoras thought that the root system of this plant species looks like a human body. You can read this myth in the book by Dioscorides titled "De Materia Medica." That is why in this painting, the root system looks like a human. **Note 3:** In an ancient herbal titled the "Herbarium of Pseudo-Apuleius," it was stated that this plant is bioluminescent. That is why I added a halo on top of it. This myth is false. These plants are not bioluminescent. Only genetically modified plants are bioluminescent. You can read about plants and bioluminescence in the review by Li et al. (2021) titled "Glowing Plants Can Light up the Night Sky? A review." It was published in "Biotechnology and Bioengineering" 118(10): 3706–3715. **Note 4:** You can read about *Mandragora officinarum* in the review by Monadi et al. (2021) that is titled "A Comprehensive Review on the Ethnopharmacology, Phytochemistry, Pharmacology, and Toxicology of the *Mandragora* Genus; from folk medicine to modern medicine." It was published in "Current Pharmaceutical Design" 27(34): 3609–3637.

Emojis

Portrait of Jana the Refulgent as a Slightly Smiling Face Emoji (U+1F642) (2021). **Page 300.** Digitally made by **Peregrinus Hierusalemsis (I, the author of this book).** Digital art made with "Microsoft Paint" from "Windows 10" (2015). 14.3 KB. **Note:** Jana looks sexy! I love her!

Portrait of Asia the Mystic as a Smiling Face with Smiling Eyes Emoji (U+1F60A) (2022). **Pages 646, & 838.** Digitally made by **Peregrinus Hierusalemsis (I, the author of this book)**. Digital art made with "Microsoft Paint" from "Windows 10" (2015). 21 KB. **Note:** Asia looks angelic! I love her!

Abstract

Allegories of Four Continents (2025). **Page 2.** Handmade by **Hugo Arboleya**. Traditional art made with mixed media. 42 x 29.7 cm. Private Collection. (In this illustration, the following species of organism is included: *Homo sapiens* Linnaeus (Primates: Hominidae) as the allegories of four continents.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species:

Phoenix

Illustration made by Alan Monroy Ojeda. © PEREGRINUS HIERUSALEMSIS, 2025, CC BY 4.0. **See label on page 870.**

Astrocaryum vulgare Von Martius (Arecales: Arecaceae), the source of the tucum fiber of the bowstring of the allegory of the Americas; *Bactris gasipaes* Kunth (Arecales: Arecaceae), the source of the peach-palm wood of the bow of the allegory of the Americas; *Triticum turgidum* Linnaeus (Poales: Poaceae), the source of the emmer infructescences inside the cornucopia of the allegory of the African Continent; *Elaeocarpus sphaericus* (Gärtner) (Oxalidales: Elaeocarpaceae), the source of the rudraksha beads of the necklace of the allegory of the Asian Continent; *Linum usitatissimum* Linnaeus (Malpighiales: Linaceae), the source of the linen of the luxury tunic of the allegory of the European Continent; *Milicia excelsa* (Welwitsch) (Rosales: Moraceae), the source of the iroko wood of the cornucopia of the allegory of the African Continent; *Aquilaria sinensis* (De Loureiro) (Malvales: Thymelaeaceae), the source of the precious agarwood incense of the allegory of the Asian Continent; *Bixa orellana* Linnaeus (Malvales: Bixaceae), the source of the annatto pigment of the loincloth of the allegory of the Americas; *Gossypium herbaceum* Linnaeus (Malvales: Malvaceae), the source of the cotton of the skirt of the allegory of the African Continent; *Gossypium barbadense* Linnaeus (Malvales: Malvaceae), the source of the cotton of the loincloth of the allegory of the Americas; *Olea europaea* Linnaeus (Lamiales: Oleaceae), the source of the olive wood of the papal ferula of the allegory of the European Continent; *Phaeoacremonium rubrigenum* Gams et al. (Togniniales: Togniniaceae), the fungal infection of the precious agarwood incense of the allegory of the Asian Continent; *Psarocolius decumanus* (Pallas) (Passeriformes: Icteridae), the source of the feathers in the headdress of the allegory of the Americas; *Kerria lacca* (Kerr) (Hemiptera: Kerridae), the source of the lac pigment of the bindi and of the luxury outfit of the allegory of the Asian Continent; and *Antheraea assamensis* Helfer (Lepidoptera: Saturniidae), the source of the muga silk of the luxury crop top and skirt of the allegory of the Asian Continent.) **Note 1:** The papal tiara of the allegory of the European Continent is made of silver and gold. **Note 2:** Agarwood is formed if and only if the wood suffers from a fungal infection. You can read this in the paper by Liu et al. (2022) titled "Integrating Multiple Omics Identifies *Phaeoacremonium rubrigenum* Acting as *Aquilaria sinensis* Marker Fungus to Promote Agarwood Sesquiterpene Accumulation by Inducing Plant Host Phosphorylation." It was published in "Microbiology Spectrum" 10(4): e0272221. **Note 3:** You can read more about this painting on **page 807.**

Customized Company Logo of Books to Hook Publishing, LLC. (2025) **Page 3.** Handmade by **Jonatas Ferreira.** Traditional art made with mixed media. 42 x 29.5 cm. Private Collection. (This logo is a specialized version that was customized to match the aesthetics and the plot of this book.) (In this illustration, the following species of organism is included: *Homo sapiens* Linnaeus (Primates: Hominidae) as the allegory of the Death and the maiden.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Tsuga heterophylla* (Rafinesque) (Pinales: Pinaceae), the source of the cellulose of the leaves of book; and *Pinus taeda* Linnaeus (Pinales: Pinaceae), the source of the cellulose of the cardboard cover of the book.) **Note 1:** The quote written in the book comes from the first article written by me that was published in a commercial publication. That was in 2007, in a magazine from Puebla de los Ángeles, Mexico. The story of how that happened is told in Chapter 21 of this book that you are now reading. You can read about the magazine where I published my article on systematics in the article

by Soto (2015) titled "¡Cien!" It was published in "Elementos: ciencia y cultura" 100: 3–6. **Note 2:** The Death and the maiden are a common motif in Western art. This is an erotic version of the danse macabre that shows the duality of life and death. You can read about it in the book by Kaiser (1995) titled "Der Tod und die Schönen Frauen: ein elementares motiv der europäischen kultur."

Coat of Arms of Peregrinus Hierusalemsis (2024). **Page 4.** Handmade by **Michelle Maiden**. Traditional art made with watercolors. 29.7 x 20.8 cm. Private Collection. (These are the parts of a coat of arms: The shield is known as escutcheon. At each side of the escutcheon there are two characters known as supporters. Above the escutcheon there is a symbol known as crest. Between the escutcheon and the crest there is a headband made of twisted fabrics known as torse.) (In this illustration, the following species of organisms are depicted as heraldic symbols: *Mandragora officinarum* Linnaeus (Solanales: Solanaceae) as the supporters that look like plants with human-looking root systems; and *Ascalapha odorata* (Linnaeus) (Lepidoptera: Erebidae) as the moth that is a heraldic charge.) (In this illustration, there is an organ depicted as a heraldic symbol. This is the species and the organ: *Homo sapiens* (Primates: Hominidae), shown as the stylized heart symbol in the crest.) (In the past, European heater shields and torses were made using natural products Some of them were obtained from living organisms. They were obtained from these species: *Linum usitatissimum* Linnaeus (Malpighiales: Linaceae), the source of the canvas that covers the shield; *Populus nigra* Linnaeus (Malpighiales: Salicaceae), the source of the black poplar wood of the shield; *Reseda luteola* Linnaeus (Brassicales: Resedaceae), the source of the torse's weld pigment; *Isatis tinctoria* Linnaeus (Brassicales: Brassicaceae), the source of the woad pigment; *Rubia tinctorum* Linnaeus (Gentianales: Rubiaceae), the source of the madder root pigment; *Bos taurus* Linnaeus (Artiodactyla: Bovidae), the source of the cowhide leather that covers the shield; and *Ovis aries* Linnaeus (Artiodactyla: Bovidae), the source of the wool of the torse.) **Note 1:** To obtain the heraldic purpure tincture, you ought to mix woad pigment with madder root pigment. You can read about this in the paper by Claisse et al. (2024) titled "Ephemeral Orchil in the Lady and the Unicorn Tapestry: recipe, experimentation, and characterisation." It was published in "Heritage" 7(7): 3455–3469. The other pigments and metals on the shield have a mineral origin. **Note 2:** This coat of arms was designed by **Carlos Navarro Gazapo**. It was certified by the Cronista de Armas de Castilla y León, **Alfonso Ceballos-Escalera y Gila**, under number 5/2018 of his memorandum book, on Tuesday the 6th of February 2018.

Title page

***Mandragora officinarum* Linnaeus, 1753 (Solanales: Solanaceae)** (2021). **Page 6.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection. **Note:** This illustration depicts my first heraldic symbol. The supporters in my coat of arms belong to this species. You can see my coat of arms on **page 4.** I inherited Quinta Santa Hildegarda, my house. I named it after St. Hildegard, a medieval physician and botanist. You can read about her in the book by Gottfried of Disibodenberg and Theodoric of Echternach titled "Vita Sanctae Hildegardis." St. Hildegard wrote a book titled "Physica." She discussed several medicinal plants there. One of them was *Mandragora officinarum*, one of the most legendary plants in medieval Europe. I decided to use this plant as a symbol for my new home. When I got a coat of arms, I decided to place two

plants of this species as my supporters. This is a reference to Quinta Santa Hildegarda.

Copyright page

Human heart (2025). **Page 9.** Handmade by **Jonatas Ferreira.** Traditional art made with mixed media. 42 x 29.5 cm. Private Collection. (In this illustration, the following species of organism is included: *Homo sapiens* Linnaeus (Primates: Hominidae) as the lecturer.) (In this illustration, there is an organ depicted as a diagram. This is the species and the organ: *Homo sapiens* (Primates: Hominidae) shown as a heart.) (In this illustration, there are products obtained from living organisms. They were obtained from these species: *Metopium brownei* (Von Jacquin) (Sapindales: Anacardiaceae), the source of the chechen wood of the table; *Swietenia macrophylla* King (Sapindales: Meliaceae), the source of the Honduran mahogany wood of the frame; *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the cotton of the denim of the jeans of the lecturer; and *Cordia dodecandra* De Candolle (Boraginales: Boraginaceae), the source of the precious ziricote wood of the pointer. **Note 1:** The shoes are synthetic. The fabrics of the crop top and the chair are synthetic. **Note 2:** This illustration depicts my second heraldic symbol. My heraldic crest shows a human heart. You can see my coat of arms on **page 4.** According to ancient physician Galen in "De Praecognitione," heart rate increases when one thinks about the person that one loves. Villa et al. (2019) found that the heart rate increases when we read the name or see the face of someone we love. They showed this in their paper titled "The Affective Processing of Loved Familiar Faces and Names: integrating fMRI and heart rate." It was published in "PLoS One" 14(4): e0216057. Hence, hearts are related to love in Western culture. According to Geoffrey Chaucer, in his poem titled "Parlement of Foules," love must be celebrated on the 14th of February, St. Valentine's Day. Therefore, heart symbols are ubiquitously displayed on that day. The use of the heart symbol on St. Valentine's Day is discussed by Alberti (2015) in her essay titled "The Heart in History." It was published in "Viewpoint: magazine of the British Society for the History of Science" 105: 1–3. The heart in my heraldic crest is a St. Valentine's Day card that I got on Friday the 14th of February 2003, when I was 18 years old. It was attached to a flower of *Rosa* Linnaeus (Rosales: Rosaceae).

Dedication

***Ascalapha odorata* (Linnaeus, 1758) (Lepidoptera: Erebidae)** (2025). **Page 11.** Handmade by **Abigail Castro Cruz**. Traditional art made with colored pencils. 39.1 x 28 cm. Private Collection. (In this illustration, the following species of organism is also included: *Samanea saman* (Von Jacquin) (Fabales: Fabaceae).) **Note:** This illustration depicts my third heraldic symbol. This is the species of moth painted on my shield. You can see my coat of arms on **page 4.** I am a lepidopterist from Coyoacán, and this is a moth that lives in Coyoacán. That is why it is displayed on my shield. You can verify that this moth is found in Coyoacán in the checklist by Rueda-Salazar and Cano-Santana (2009) that is titled "Artropodofauna." It was published in the book titled "Biodiversidad del Ecosistema del Pedregal de San Ángel" pp 171–201.

Contents

Mermaid (2025). **Page 13.** Handmade by **Abigail Castro Cruz**. Traditional art made with white pencil. 28.7 x 22.7 cm. Private Collection. (In this illustration, the following species of organism is depicted as a religious symbol: *Zamenis longissimus* (Laurenti) (Squamata: Colubridae) as the snakes made of gold in the

caduceus.) **Note 1:** Melusine is a fairy that was a popular character of medieval French folklore. You can read about her in the fairytale by D'Arras (1394) titled "Roman de Mélusine." Paracelsus (1568) states in "De Vita Longa" that Melusine is a symbol of the alchemical wedding. Hence, mermaids are sometimes shown in alchemical emblems. My mermaid does not look like Melusine, but she hides alchemical secrets! **Note 2:** You can read about mermaids in the paper by Viscardi et al. (2014) titled "Mermaids Uncovered." It was published in the "Journal of Museum Ethnography" 27: 98–116.

Unicorn (2024). **Page 19.** Handmade by **Cornelia Papendick**. Traditional art made with mixed media. 29.5 x 21 cm. Private Collection. (In this illustration, the following species of organism is also included: *Homo sapiens* Linnaeus (Primates: Hominidae) as the virgin girl.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Castanea sativa* Miller (Fagales: Fagaceae), the source of the sweet chestnut wood of the staff; and *Chamaenerion angustifolium* (Linnaeus) (Myrtales: Onagraceae), the source of the fireweed flowers in the crown of the virgin girl.) **Note 1:** You can read the allegorical story of the virgin girl and the unicorn in an ancient bestiary titled "Physiologus." **Note 2:** You can read more about unicorns in the essay by Spary (2019) titled "On the Ironic Specimen of the Unicorn Horn in Enlightened Cabinets." It was published in the "Journal of Social History" 52(4): 1033–1060.

Acknowledgements

Angel Girl (2024). **Page 21.** Handmade by **Sara Galián Cárceles (SarAngelyst)**. Traditional art made with watercolors. 28.2 x 21 cm. Private Collection. (In this illustration, the following species of organism is also included: *Kogia sima* (Owen) (Artiodactyla: Kogiidae).) **Note 1:** She has a halo because she is a shiny princess, as radiant as a star! In some myths, angels are stars. For example, in the Zoroastrian "Avesta," the star known as Sirius is Tishtrya. In the biblical "New Testament," in the "Book of Revelation," it is stated that "The seven stars are the seven angels of the seven churches." **Note 2:** The marine mammal depicted in this painting is an odontocete. In Western art, divine messenger spirits are often shown as companions of odontocetes. You can read about this in the dissertation by Stebbins (1929) titled "The Dolphin in the Literature and Art of Greece and Rome: dissertation submitted to the board of university studies of the Johns Hopkins University in conformity with the requirements of the degree of doctor of philosophy 1927." **Note 3:** You can read about apparitions of divine beings that provide religious revelations in the essay by Arzy et al. (2005) titled "Why Revelations have Occurred on Mountains? Linking mystical experiences and cognitive neuroscience." It was published in "Medical Hypotheses" 65(5): 841–845.

Demoness (2024). **Page 23.** Handmade by **Michael McDaniel**. Traditional art made with mixed media. 36.5 x 28 cm. Private Collection. (In this illustration, there is a natural product obtained from a living organism. It was obtained from this species: *Alnus orientalis* Decaisne (Fagales: Betulaceae), the source of the Oriental alder wood of the sword's grip.) **Note 1:** You can read about demons in the essay by Westerink (2014) titled "Demonic Possession and the Historical Construction of Melancholy and Hysteria." It was published in "History of Psychiatry" 25(3): 335–349.

Preface: This book is special; please read this one-page preface before reading it.

Welcome Illustration (2023). **Page 25.** Handmade by **Yu Liu**. Traditional art made with watercolors. 31 x 21 cm. Private Collection. (In this illustration, the following species of organisms are included: *Patiria miniata* (Von Brandt) (Valvatida: Asterinidae); *Homo sapiens* Linnaeus (Primates: Hominidae); *Ostrea lurida* Carpenter (Ostreida: Ostreidae); and *Compsomyax subdiaphana* (Carpenter) (Venerida: Veneridae).) **Note:** The shoes and fabrics are synthetic.

Introductory matters

***Pinus durangensis* Martínez, 1942 (Pinales: Pinaceae)** (2022). **Page 27.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.5 x 22 cm. Private Collection.

Portrait of Jorge Reyes Mejía, my uncle (2022). **Page 28.** Handmade by **Anastasia Liogka**. Traditional art made with acrylic paints. 40.3 x 29.7 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Vallisneria spiralis* Linnaeus (Alismatales: Hydrocharitaceae) as the aquatic plants; and *Pterophyllum scalare* (Schultze) (Cichliformes: Cichlidae) as the pet fish.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the cotton of my uncle's shirt; and *Manilkara zapota* (Linnaeus) (Ericales: Sapotaceae), the source of the sapodilla wood of the aquarium cabinet stand.)

***Pterophyllum scalare* (Schultze, 1823) (Cichliformes: Cichlidae)** (2023). **Page 29.** Handmade by **Alan Monroy Ojeda**. Traditional art made with mixed media. 35 x 25 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Montagnia macrospora* (Montagne) (Batrachospermales: Batrachospermaceae) as part of the periphyton; *Stigeoclonium tenue* (Agardh) (Chaetophorales: Chaetophoraceae) as part of the periphyton; *Rhizoclonium riparium* (Roth) (Cladophorales: Cladophoraceae) as part of the periphyton; *Elodea granatensis* Bonpland (Alismatales: Hydrocharitaceae) as aquatic plants; *Fragilariforma brasiliensis* (Grunow) (Fragilariales: Fragilariaceae) as part of the periphyton; *Eunotia intricans* Lange-Bertalot & Metzeltin (Eunotiales: Eunotiaceae) as part of the periphyton; *Eunotia amazonica* Ferreira de Almeida & Wetzel (Eunotiales: Eunotiaceae) as part of the periphyton; *Eunotia rabenhorstiana* (Grunow) (Eunotiales: Eunotiaceae) as part of the periphyton; *Frustulia saxoneotropica* Metzeltin & Lange-Bertalot (Naviculales: Amphipleuraceae) as part of the periphyton; and *Kurtkrammeria frequentis* (Krammer) (Cymbellales: Cymbellaceae) as part of the periphyton.) (In this illustration, the following plant residue is included: *Eschweilera tenuifolia* (Berg) (Ericales: Lecithydaceae) as the submerged fallen tree branch.)

A supernatural death

***Crotalus ravus* Cope, 1865 (Squamata: Viperidae)** (2024). **Page 31.** Handamde by **Néstor E. Altamirano (Camus Altamirano)**. Traditional art made with colored pencils.30.3 x 22.7 cm. Private Collection.

Introduction

***Cetorhinus maximus* (Gunnerus, 1765) (Lamniformes: Cetorhinidae)** (2023). **Page 35.** Handmade by **Aslam Narváez**. Traditional art made with oil. 30.3 x 25.3 cm. Private Collection.

Part One: The Doctrine of Enríquez, the Lawgiver

***Ichthyophthirius multifiliis* Fouquet, 1876 (Hymenostomatida: Ichthyophthiriidae)** (2021). **Page 45.** Handmade by **Rafael Calderón**. Traditional art made with pencil. 28.2 x 21.8 cm. Private Collection.

Portrait of Enríquez, the lawgiver (2022). **Page 46.** Handmade by **Līga Kļaviņa-Raiska**. Traditional art made with watercolors. 41.8 x 29.8 cm. Private Collection. (In this illustration, the following species of organism is also included: *Canis familiaris* Linnaeus (Carnivora: Canidae) as Enríquez's pet.) (In this illustration, there is a natural product obtained from a living organism. It was obtained from this species: *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the cotton of the denim of Enríquez's jeans.) **Note 1:** The shoes and most fabrics are synthetic. **Note 2:** Enríquez is wearing the graduation attire worn by students of veterinary medicine at Universidad Nacional Autónoma de México. You can see this academic dress in the article by Méndez (2022) titled "La Historia Detrás de la Egresada que Llevó una Borreguita a Las Islas de CU y se Volvió Viral." It was published in "Gaceta UNAM" 5(270): 22. **Note 3:** The alchemical stages of the Opus Magnum are nigredo (black stage), albedo (white stage), citrinitas (yellow stage), and rubedo (red stage). You can read about these changes of color, as a result of chemical reactions, in the alchemical text by Pseudo-Lull titled "Codicillus." The dragon allegories of the stages of the Magnum Opus, including the ouroboros, are amphipteres. You can read about snake-like dragons in the review by Senter et al. (2016) titled "Snake to Monster: Conrad Gessner's schlangenbuch and the evolution of the dragon in the literature of natural history." It was published in the "Journal of Folklore Research" 53(1): 67–124.

***Canis familiaris* Linnaeus, 1758 (Carnivora: Canidae)** (2023). **Page 47.** Handmade by **Javier Montesinos Medrano**. Traditional art made with mixed media. 47.5 x 33.5 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Tulipa gesneriana* Linnaeus (Liliales: Liliaceae), the source of the garden tulip flower; and *Ilex opaca* Aiton (Aquifoliales: Aquifoliaceae) as the source of the American holly wood of the table.) **Note:** The garden tulip flower shown belongs to the legendary strain known as Semper Augustus. According to legend, it was extremely expensive during the tulip mania of the 17th century. You can read about it in the essay by Garber (1989) titled "Tulipmania." It was published in "The Journal of Political Economy" 97(3): 535–560.

CHAPTER 1. *Opuntia streptacantha*

***Opuntia streptacantha* Lemaire, 1839 (Caryophyllales: Cactaceae)** (2021). **Page 49.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 29.6 x 23.2 cm. Private Collection. (In this illustration, the following species of organism is also included: '*Candidatus* Phytoplasma trifolii' Hiruki & Wang (Acholeplasmatales: Acholeplasmataceae) as a bacterial infection in the cladode.)

Allegory of the Americas. (2025). **Page 55.** Handmade by **Cookie Chocoladka**. Traditional art made with markers. 29.5 x 21 cm. Private Collection. (In this illustration, the following species of organisms are included: *Homo sapiens* Linnaeus (Primates: Hominidae) as the allegorical young woman; *Melanosuchus niger* (Von Spix) (Crocodilia: Alligatoridae) as the allegorical caiman; and *Amazona amazonica* (Linnaeus) (Psittaciformes: Psittacidae) as the allegorical bird.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Astrocaryum vulgare* Von Martius (Arecales: Arecaceae), the source of the tucum fiber of the bowstring;

Bactris gasipaes Kunth (Arecales: Arecaceae), the source of the peach-palm wood of the bow; *Guadua glomerata* Munro (Poales: Poaceae), the source of the arrow point; *Gynerium sagittatum* (Aublet) (Poales: Poaceae), the source of the shaft of the arrow; *Bixa orellana* Linnaeus (Malvales: Bixaceae), the source of the annatto pigment of the loincloth; *Gossypium barbadense* Linnaeus (Malvales: Malvaceae), the source of the cotton of the loincloth; *Homo sapiens* Linnaeus (Primates: Hominidae), the source of the severed head; *Mitu tuberosum* (Von Spix) (Galliformes: Cracidae), the source of the feather that is the fletching of the arow; and *Psarocolius decumanus* (Pallas) (Passeriformes: Icteridae), the source of the feathers in the headdress.) **Note 1:** This is how North America and South America, the so-called New World, was allegorically depicted during the times of European colonialism. You can read about this in the book by Ripa titled "Iconologia" (second edition, 1603). **Note 2:** You can read more about this painting on **pages 771, 789, & 807.**

CHAPTER 2. *Laelia speciosa*

***Laelia speciosa* (Kunth, 1816) (Asparagales: Orchidaceae)** (2021). **Page 67.** Handmade by **Elvia Esparza**. Traditional art made with watercolors. 34 x 27 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Pantoea cypripedii* (Hori) (Enterobacterales: Erwiniaceae) as a bacterial infection in a leaf; *Fabronia ciliaris* (Von Bridel) (Hypnales: Fabroniaceae) as an epiphytic moss; *Quercus deserticola* Trelease (Fagales: Fagaceae) as the host tree of the epiphytes; and *Flavopunctelia flaventior* (Stirtion) (Lecanorales: Parmeliaceae) as the mycobiont of the epiphytic lichen.)

CHAPTER 3. *Ursus maritimus*

***Ursus maritimus* Phipps, 1774 (Carnivora: Ursidae)** (2023). **Page 83.** Handmade by **Javier Montesinos Medrano**. Traditional art made with mixed media. 47.5 x 33.5 cm. Private Collection. (In this illustration, there is a natural product obtained from a living organism. It was obtained from this species: *Tectona grandis* Von Linné (Lamiales: Lamiaceae), the source of the teak wood of the cabinet.) **Note:** The sea monster is known as kraken. You can read about it in the book by Pontoppidan titled "Det Første Forsøg paa Norges Naturlige Historie" (volume 2, 1753).

Panteón de Santa Paula, Guanajuato City, Guanajuato, Mexico (2024) **Page 91.** Handmade by **Jo Herbert**. Traditional art made with mixed media. 42 x 29.7 cm. Private Collection. (The mountain seen in the background is known as Cerro Bayo.) (In this illustration, the following species of organisms are included: *Cupressus sempervirens* Linnaeus (Cupressales: Cupressaceae) as a tree living inside the graveyard; *Persea americana* Miller (Laurales: Lauraceae) as the tree living inside a private house; *Canna indica* Linnaeus (Zingiberales: Cannaceae) as the herbs grown in the roof garden of a private house; and *Jacaranda mimosifolia* Don (Lamiales: Bignoniaceae) as some trees living inside the graveyard.) **Note:** The flying spirit is a ghost. You can read a ghost story about this graveyard in the essay by Medrano de Luna (2020) titled "La Leyenda de 'La Niña Araña del Panteón' en Guanajuato, México: de la versión oral del narrador don Luis Marín a los remedos de Internet." It was published in "Boletín de Literatura Oral" 10: 11–26. You can read more about ghosts in the essay by Hume (2018) titled "Ghosts in the Health Machine: visits from the dead in hospital." It was published in "Medicine Anthropology Theory" 5(1): 88–101.

CHAPTER 4. *Ambystoma altamirani*

***Ambystoma altamirani* Dugès, 1895 (Urodela: Ambystomatidae)** (2021). **Page**

103. Handmade by **Aslam Narváez**. Traditional art made with oil. 30.3 x 25.3 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Alchemilla pectinata* Kunth (Rosales: Rosaceae) as the herbs; *Ochrolechia mexicana* Vainio (Pertusariales: Ochrolechiaceae) as the mycobionts of the epiphytic lichens growing on the fallen oak stick; and *Canoparmelia texana* (Tuckerman) (Lecanorales: Parmeliaceae) as the mycobionts of the epiphytic lichens growing on the fallen pine twigs.) (In this illustration, there is an organ depicted. This is the species and the organ: *Pinus ayacahuite* Ehrenberg ex Von Schlechtendal (Pinales: Pinaceae) shown as the female Mexican white pine cone.) (In this illustration, the following plant residues are included: *Pinus ayacahuite* Ehrenberg ex Von Schlechtendal (Pinales: Pinaceae) as the fallen acicular leaves and twigs in the plant litter; *Quercus laurina* Bonpland (Fagales: Fagaceae) as the fallen laminated leaves and stick in the plant litter; and *Arbutus xalapensis* Kunth (Ericales: Ericaceae) as the source of the piece of Texas madrone wood in the plant litter, it is reddish.)

CHAPTER 5. *Commiphora myrrha*

***Commiphora myrrha* (Nees von Esenbeck, 1828) (Sapindales: Burseraceae)** (2022). **Page 123.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.5 x 22 cm. Private Collection. **Note:** You can see myrrh incense inside the rectangle. This resin is obtained from this tree. You can read about it in the review by Tucker (1986) titled "Frankincense and Myrrh." It was published in "Economic Botany" 40: 425–433.

CHAPTER 6. *Algansea barbata*

***Algansea barbata* Álvarez del Villar & Cortés, 1964 (Cypriniformes: Leuciscidae)** (2023). **Page 143.** Handmade by **Aslam Narváez**. Traditional art made with oil. 30.3 x 25.3 cm. Private Collection. (In this illustration, the following species of organism is also included: *Myriophyllum heterophyllum* Michaux (Saxifragales: Haloragaceae).)

Santo Desierto del Carmen, Tenancingo, State of Mexico, Mexico (2025) **Page 149.** Handmade by **Jo Herbert**. Traditional art made with mixed media. 42 x 29.7 cm. Private Collection. (In this illustration, the following species of organisms are included: *Pinus montezumae* Lambert (Pinales: Pinaceae) as some trees of the native forest; *Pinus pringlei* Shaw (Pinales: Pinaceae) as some trees of the native forest; *Pinus leiophylla* Schiede ex Von Schlechtendal & Von Chamisso (Pinales: Pinaceae) as some trees of the native forest; *Cupressus sempervirens* Linnaeus (Cupressales: Cupressaceae) as ornamental trees; *Stenotaphrum secundatum* (Walter) (Poales: Poaceae) as the garden groundcover plants; *Quercus calophylla* Von Schlechtendal & Von Chamisso (Fagales: Fagaceae) as some trees of the native forest; *Quercus magnoliifolia* Née (Fagales: Fagaceae) as some trees of the native forest; and *Homo sapiens* Linnaeus (Primates: Hominidae) as the cleric.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Guaiacum sanctum* Linnaeus (Zygophyllales: Zygophyllaceae), the source of the precious lignum vitae holywood of the cleric's crosier; *Quercus calophylla* Von Schlechtendal & Von Chamisso (Fagales: Fagaceae), the source of the encino ancho oak wood of the door; *Plicopurpura columellaris* (Lamarck) (Neogastropoda: Muricidae), the source of the precious Tyrian purple pigment of the cleric's luxury cassock and mitre; and *Bombyx mori* (Linnaeus) (Lepidoptera: Bombycidae), the source of the mulberry silk of the cleric's luxury cassock and mitre.) **Note:** the luxury cassock and mitre also have gold embroidery.

Part Two: The Doctrine of Emilio the Sage

***Naja haje* (Linnaeus, 1758) (Squamata: Elapidae)** (2024). **Page 163.** Handamde by **Néstor E. Altamirano (Camus Altamirano)**. Traditional art made with colored pencils. 30.3 x 22.7 cm. Private Collection.

Portrait of Emilio the Sage (2021). **Page 164.** Handmade by **Galina Alexandrovna Loseva (Glam Beckett)**. Traditional art made with markers. 30 x 21 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the cellulose of the leaves of the book; *Bos taurus* Linnaeus (Artiodactyla: Bovidae), the source of the cowhide leather of the shoes of Spiritual Master Emilio; *Capra hircus* Linnaeus (Artiodactyla: Bovidae), the source of the goatskin leather of the book cover; and *Homo sapiens* Linnaeus (Primates: Hominidae), the source of the skull.) **Note 1:** Fabrics are synthetic. **Note 2:** The halo is a symbol of divinity. According to Pseudo-Dionysius in "De Coelesti Hierarchia," God YHWH (Allah) illuminates His messengers with His holy light and they in turn irradiate it. **Note 3:** According to Marcellinus in "Res Gestae," the Goths were members of European tribes that lived during the time of the Roman Empire. Giorgio Vasari, like many other Renaissance scholars, idealized everything related to classical antiquity. Therefore, he considered non-Roman peoples barbarians. He considered that the Goths and other barbarians who conquered the Western Roman Empire were uncivilized. Hence, he referred to late medieval architecture, as Gothic. For him, this meant barbaric, not as magnificent as Graeco-Roman art. Vasari (1550) stated this in his book titled "Le Vite de Più Eccellenti Architetti, Pittori, et Scultori Italiani, da Cimabue Insino a' Tempi Nostri." Since then, late Western European medieval architecture has been known as Gothic. Horace Walpole wrote a novel titled "The Castle of Otranto, a Gothic novel" (second edition, 1765). The reason why he named it a "Gothic novel" is that it was situated in a medieval castle. It was a ghost story. Since then, Romanticism horror stories were known as Gothic. Due to the association of the word "Gothic" with horror and ghosts, John Stickney stated that a 20th-century rock band named The Doors was Gothic. That was because their shows were meant to be scary. Stickney wrote this in his article titled "Four Doors to the Future: Gothic rock is their thing." It was published in the newspaper "The Williams Record" (October 24, 1967). The Doors are not considered a goth band, as the goth movement started later. Nevertheless, modern goth subculture is named "goth" in the same sense as The Doors were labeled "Gothic," as it is a music subculture that explores the eerie sides of human nature. In this sense, they are not related to what Vasari knew as "Gothic" art. However, modern goths have included some aesthetic motifs from medieval art. You can read about this in the essay by Gunn (1999) titled "Gothic Music and the Inevitability of Genre." It was published in "Popular Music and Society" 23(1): 31–50. Among the medieval Gothic art motifs appropriated by goths are gargoyles. You can read this in the essay by Young (1999) titled "Dancing on Bela Lugosi's Grave: the politics and aesthetics of gothic club dancing." It was published in "Dance Research" 17(1): 75–97. Thus, Spiritual Master Emilio, a goth, has a gargoyle as his companion. You can read about gargoyles, a motif of Gothic architecture, in the essay by Den Hartog (2023) titled "On the Meaning of Gargoyles." It was published in the "Bulletin du Centre d'Études Médiévales d'Auxerre" Hors-série 13.

***Homo sapiens* Linnaeus, 1758 (Primates: Hominidae)** (2023). **Page 165.** Handmade by **Hugo Arboleya**. Traditional art made with mixed media. 42 x 29.7 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from this species: *Bos taurus* Linnaeus (Artiodactyla: Bovidae), the source of the low-quality cowhide leather of the boots.) **Note 1:** The clothes are synthetic. **Note 2:** She is wearing the outfit worn by goth girls in the 2000s. You can learn about 2000s goth subculture in the review by Rutledge et al. (2008) titled "Vulnerable Goth Teens: the role of schools in this psychosocial high-risk culture." It was published in the "Journal of School Health" 78(9): 459–464.

CHAPTER 7. *Desmodus rotundus*

***Desmodus rotundus* (Geoffroy Saint-Hilaire, 1810) (Chiroptera: Phyllostomidae)** (2023). **Page 167.** Handmade by **Javier Montesinos Medrano**. Traditional art made with mixed media. 47.5 x 33.5 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Streptomyces fradiae* (Waksman & Curtis) (Streptomycetales: Streptomycetaceae), the source of the neomycin in the vaccine; *Guibourtia demeusei* (Harms) (Fabales: Fabaceae), the source of the precious bubinga wood of the table; and *Homo sapiens* Linnaeus (Primates: Hominidae), the source of the Medical Research Council Cell Strain-5 (MRC-5) (the inactivated viruses of the vaccine were produced using these cells.)) **Note 1:** The organic molecules used to make the vaccine are synthetic. **Note 2:** In Latin America, most cases of cattle and human rabies are transmitted by vampire bats. You can find out about this in the review by Benavides et al. (2020) titled "Defining New Pathways to Manage the Ongoing Emergence of Bat Rabies in Latin America." It was published in "Viruses" 12(9): 1002. This is the reason why I included a rabies vaccine in this illustration. You can read about rabies vaccines in the review by Natesan et al. (2023) titled "Developments in Rabies Vaccines: the path traversed from Pasteur to the modern era of immunization." It was published in "Vaccines (Basel)" 11(4): 756. **Note 3:** André Lwoff stated that an organism is "an independent unit of integrated and interdependent structures and functions." Lwoff (1957) wrote this in his essay titled "The Concept of Virus." It was published in the "Journal of General Microbiology" 17: 239–253. According to this definition, viruses are not alive because they cannot self-reproduce. Viruses need cells to be able to reproduce. It is surprising that many commercially available vaccines include a label that states, "killed virus" instead of "inactivated virus." You can see this label in the bottle shown in this painting. The reason why this is peculiar is that you cannot "kill" something that is not alive. Some people think viruses are alive. For example, Salvador Luria thought that an organism has "individuality, historical continuity, and evolutionary independence." Luria (1959) wrote this in his essay titled "Viruses as Infective Genetic Materials." It was published in the book "Immunity and Virus Infection: surveys basic research in these two fields emphasizing the immunology and epidemiology of poliomyelitis as influenced by killed and live virus vaccine" pp 188–195. Luria's definition of "life" does not exclude viruses. Thus, he thought they were alive. Van Regenmortel and Mahy said that viruses "are nonliving infectious entities that can be said, at best, to lead a kind of borrowed life." This is because they use the cell machinery of their hosts to be able to reproduce. Van Regenmortel and Mahy (2004) stated their lovely quote in their essay titled "Emerging Issues in Virus Taxonomy." It was published in "Emerging

Infectious Diseases" 10(1): 8–13. "Life" is a word. The meaning of words depends on their definitions. There is not a universally agreed definition of "life." This is convincingly argued by Machery (2012) in his essay titled "Why I Stopped Worrying About the Definition of Life... and why you Should as Well." It was published in "Synthese" 185: 145–164. Therefore, you are free to believe whatever you want. If you want to believe viruses are not living beings, you are right. If you want to believe viruses are living organisms, you are right. If you want to believe viruses are half alive, you are right. I respect your definition of "life." However, you must accept that there are other equally valid opinions, as Sextus Empiricus taught about all polemical opinions in his "Outlines of Pyrrhonism."

CHAPTER 8. *Aquila chrysaetos*

***Aquila chrysaetos* (Linnaeus, 1758) (Accipitriformes Accipitridae)** (2022). **Page 185.** Handmade by **Radka Bošková**. Traditional art made with pastel. 35 x 47 cm. Private Collection. (In this illustration, there are organs depicted as religious symbols. These are the species and the organs: *Punica granatum* Linnaeus (Myrtales: Lythraceae), shown as the stylized pomegranate flowers that are the fleurons made of marble in the Corinthian capital; and *Acanthus spinosus* Linnaeus (Lamiales: Acanthaceae), shown as the stylized spiny bear's breech leaves made of marble in the Corinthian capital.) **Note:** You can read the legend of the origin of the Corinthian order in the book by Vitruvius titled "De Architectura."

Portrait of Verónica Jiménez, the girl of the autumnal sunsets (2024). **Page 191.** Handmade by **Patricia Chu**. Traditional art made with mixed media. 28 x 21.7 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Eptesicus fuscus* (Beauvois) (Chiroptera: Vespertilionidae) as Verónica's sacred mammal; and *Megascops asio* (Linnaeus) (Strigiformes: Strigidae) as Verónica's sacred bird.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Pinus patula* Schiede ex Von Schlechtendal & Von Chamisso (Pinales: Pinaceae), the source of the Mexican weeping pine wood of the lab table; *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the cotton of the denim of Verónica's jeans; and *Bos indicus* Linnaeus (Artiodactyla: Bovidae), the source of the low-quality cowhide leather of Verónica's belt.) **Note 1:** The shoes and the T-shirt are synthetic. **Note 2:** Verónica looks adorable! I love her!

CHAPTER 9. *Yersinia pestis*

***Yersinia pestis* (Lehmann & Neumann, 1896) (Enterobacterales: Yersiniaceae)** (2023). **Page 205.** Handmade by **Rafael Calderón**. Traditional art made with ink. 28.2 x 21.5 cm. Private Collection.

CHAPTER 10. *Brahea dulcis*

***Brahea dulcis* (Kunth, 1816) (Arecales: Arecaceae)** (2022). **Page 223.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.5 x 22 cm. Private Collection.

CHAPTER 11. *Streptoprocne zonaris*

***Streptoprocne zonaris* (Shaw, 1796) (Apodiformes: Apodidae)** (2025). **Page 243.** Handamde by **Néstor E. Altamirano (Camus Altamirano)**. Traditional art made with colored pencils. 30.3 x 22.7 cm. Private Collection.

CHAPTER 12. *Cutibacterium acnes*

***Cutibacterium acnes* (Gilchrist, 1900) (Propionibacteriales: Propionibacteriaceae)** (2023). **Page 263.** Handmade by **Rafael**

Calderón. Traditional art made with ink. 28.2 x 21.6 cm. Private Collection.

CHAPTER 13. *Agave tequilana*

***Agave tequilana* Weber, 1902 (Asparagales: Asparagaceae)** (2022). **Page 281.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.5 x 22 cm. Private Collection.

Part Three: The Doctrine of Jana the Refulgent

***Coffea arabica* Linnaeus, 1753 (Gentianales: Rubiaceae)** (2022). **Page 301.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.5 x 22 cm. Private Collection.

Portrait of Jana the Refulgent (2021). **Page 302.** Handmade by **Kristina Kozlova (Princess Ailish)**. Traditional art made with watercolors. 29.5 x 21 cm. Private Collection. (In this illustration, the following species of organism is also included: *Grus grus* Linnaeus (Gruiformes: Gruidae) as Jana's sacred bird.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the cellulose of the leaves of the book; *Gossypium barbadense* Linnaeus (Malvales: Malvaceae), the source of the cotton of the denim of Jana's designer miniskirt; *Psilocybe caerulescens* Murrill (Agaricales: Hymenogastraceae), the source of Jana's landslide mushroom basidiocarp; *Lama vicugna* (Molina) (Artiodactyla: Camelidae), the source of the fabric of Jana's designer jacket; *Bos taurus* Linnaeus (Artiodactyla: Bovidae), the source of the high-quality calfskin leather of Jana's designer belt; and *Capra hircus* Linnaeus (Artiodactyla: Bovidae), the source of the cashmere of Jana's designer crop top and of the goatskin leather of the book cover.) **Note:** I like Jana's belly, legs, and feet. She looks sexy! I love her!

***Psilocybe caerulescens* Murrill, 1923 (Agaricales: Hymenogastraceae)** (2021). **Page 303.** Handmade by **Valentina D'Onofrio (Nahima)**. Traditional art made with watercolors. 30 x 21 cm. Private Collection. (In this illustration, the following species of organism is also included: *Bouteloua repens* (Kunth) (Poales: Poaceae).) **Note 1:** The basidiocarps of the species of mushrooms that belong to the genus *Psilocybe* (Fries) (Agaricales: Hymenogastraceae) contain a substance known as psilocybin ($C_{12}H_{17}N_2O_4P$). This was discovered by Hofmann et al. (1958) and published in their paper titled "Psilocybin, ein Psychotroper Wirkstoff aus dem Mexikanischen Rauschpilz *Psilocybe mexicana* Heim." It was published in "Experientia" 14(3): 107–109. Psilocin, the active metabolite of psylocibin, produces hallucinations when it stimulates 5-hydroxytryptamine 2A receptors (5-HT2A) that are located in the plasma membranes of the brain's neurons. 5-hydroxytryptamine is commonly known as serotonin, so 5-HT2A receptors are a particular type of serotonin receptors. You can read this in the paper by Madsen et al. (2019) titled "Psychedelic Effects of Psilocybin Correlate with Serotonin 2A Receptor Occupancy and Plasma Psilocin Levels." It was published in "Neuropsychopharmacology" 44(7): 1328–1334. 5-HT2A receptors are involved in visual hallucinations, regardless of being produced by drugs or not. This was discovered by Ballanger et al. (2010) and published in their paper titled "Serotonin 2A Receptors and Visual Hallucinations in Parkinson Disease." It was published in "Archives of Neurology" 67(4): 416–421. Visual hallucinations often include geometric shapes, as reported by Bressloff et al. (2002) in their essay titled "What Geometric Visual Hallucinations

Tell Us About the Visual Cortex." It was published in "Neural Computation" 14(3): 473–491. You can see one of such typical geometric visual hallucinations behind the mushrooms in this illustration. No need to take drugs! Carl Jung wrongly identified these hallucinations as religious mandalas. Jung (1944) wrote this in his unholy book "Psychologie und Alchemie: mit 270 illustrationen." **Note 2:** Valentina D'Onofrio painted some orbs. I guess it is drizzling, and the backscatter of light produced by the flash of a digital camera is causing them. This is a painting, so obviously there was no flash, but Valentina tried to imitate the point of view of digital cameras in her painting. You can read about orbs in the paper by Parsons (2014) titled "Orbs, some Definitive Evidence that they are not Paranormal." It was published in "Paranthropology: journal of anthropological approaches to the paranormal" 5(2): 44–49.

CHAPTER 14. *Triticum aestivum*

***Triticum aestivum* Linnaeus, 1753 (Poales: Poaceae)** (2022). **Page 305.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

Science Block of Cambridge Arts & Sciences (2025). **Page 311.** Handmade by **Hugo Arboleya**. Traditional art made with mixed media. 42 x 28 cm. Private Collection. (In this illustration, there is a natural product obtained from a living organism. It was obtained from this species: *Pinus radiata* Don (Pinales: Pinaceae), the source of the acetylated wood of the door.)

CHAPTER 15. *Haemophilus influenzae*

***Haemophilus influenzae* (Lehmann & Neumann, 1896) (Pasteurellales: Pasteurellaceae)** (2021). **Page 325.** Handmade by **Rafael Calderón**. Traditional art made with ink. 29 x 22.5 cm. Private Collection.

CHAPTER 16. *Vitis vinifera*

***Vitis vinifera* Linnaeus, 1753 (Vitales: Vitaceae)** (2022). **Page 347.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.5 x 22 cm. Private Collection.

Philosophy Society of Cambridge Arts & Sciences 2004–2005 (2023). **Pages 356 & 357.** Handmade by **Anna Maria Rupp (MangaWitch)**. Traditional art made with mixed media. Each of the two pages measures 32.5 x 29.5 cm. Private Collection. (I shall now identify the people mentioned in Chapter 16: The guy with eyeglasses is Nils Petri. The guy wearing a hoodie is Gleb. The guy with the blue T-shirt is Gareth. The brown-skinned guy included in the lowermost portrait of **page 356** is me, Peregrinus Hierusalemsis, the author of this book. The beardless guy wearing a suit jacket is Oliver Brewis. The girl wearing a hat is Magdalena. The hatless girl with loose hair is Katherine. The bearded man wearing a suit jacket is Mr. Owens.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Linum usitatissimum* Linnaeus (Malpighiales: Linaceae), the source of the linen of the students' shirts; *Gossypium barbadense* Linnaeus (Malvales: Malvaceae), the source of the fabric of most of the other clothes shown; *Ovis aries* Linnaeus (Artiodactyla: Bovidae), the source of the fabric of Vitaliy's jacket and of Walderdorff's vest; *Capra hircus* Linnaeus (Artiodactyla: Bovidae), the source of the cashmere of Vitaliy's scarf, of Brewis's jacket, and of Max's jumper; *Castor fiber* Linnaeus (Rodentia: Castoridae), the source of the beaver felt of Magdalena's haute couture hat; *Pinctada maxima* (Jameson) (Ostreida: Margaritidae), the source of the pearls in Magdalena's luxury necklace and earrings; and *Bombyx mori* (Linnaeus) (Lepidoptera:

Bombycidae), the source of the mulberry silk of Magdalena's haute couture dress and hat.) **Note 1:** Mr. Owens's clothes are synthetic. **Note 2:** Magdalena looks hot! I love her! Katherine looks pretty! I love her!

CHAPTER 17. *Androctonus australis*

***Androctonus australis* (Linnaeus, 1758) (Scorpiones: Buthidae)** (2023). **Page 371.** Handmade by **Adriana Carrasco Salgado (adrialychnis)**. Traditional art made with mixed media. 29.7 x 22 cm. Private Collection.

Portrait of Natalie, my former girlfriend (2023). **Page 379.** Handmade by **Lisa Saukel (Lighane)**. Traditional art made with markers. 29.5 x 20.9 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Viola* x *wittrockiana* Gams (Malpighiales: Violaceae) the source of Natalie's garden pansy flower; *Pastinachus sephen* (Forsskål) (Myliobatiformes: Dasyatidae), the source of the luxury galuchat leather of Natalie's designer bag, belt, and boots; *Lama guanicoe* (Müller) (Artiodactyla: Camelidae), the source of the wool of Natalie's designer hat, scarf, and gloves; and *Capra hircus* Linnaeus (Artiodactyla: Bovidae), the source of the cashmere of Natalie's designer coat, crop top, and trousers.) **Note:** I like Natalie's belly. Natalie looks cute! I love her!

CHAPTER 18. *Nicotiana tabacum*

***Nicotiana tabacum* Linnaeus, 1753 (Solanales: Solanaceae)** (2021). **Page 393.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

Portrait of the first Birgitta, the sinister (2023). **Page 401.** Handmade by **Paloma Díaz Gutierrez (Balandis)**. Traditional art made with mixed media. 28 x 16.5 cm. Private Collection. (In this illustration, the following species of organism is also included: *Leptailurus serval* (Von Schreber) (Carnivora: Felidae) as the luxury, exotic pet of Birgitta the First.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the candle wick; *Lama vicugna* (Molina) (Artiodactyla: Camelidae), the source of the fabric of the haute couture coat and skirt of Birgitta the First; *Lama guanicoe* (Müller) (Artiodactyla: Camelidae), the source of the wool of the haute couture stockings of Birgitta the First; *Acrochordus javanicus* Hornstedt (Squamata: Acrochordidae), the source of the luxury karung leather of the designer shoes of Birgitta the First; *Apis mellifera* Linnaeus (Hymenoptera: Apidae), the source of the wax of the candle; and *Bombyx mori* (Linnaeus) (Lepidoptera: Bombycidae), the source of the mulberry silk of the haute couture blouse and bowtie of Birgitta the First.)

CHAPTER 19. *Lophophora williamsii*

***Lophophora williamsii* (Lemaire ex Cels, 1842) (Caryophyllales: Cactaceae)** (2024). **Page 417.** Handmade by **Yuliia Fomina (Monde_Lumineux)**. Traditional art made with watercolors. 38 x 26 cm. Private Collection. (In this illustration, the following species of organism is also included: *Homo sapiens* Linnaeus (Primates: Hominidae).)

Agnese, Zafeiria, and Saba Drawing Plants in the Arid Lands House of the Royal Botanic Garden Edinburgh (2023). **Pages 422 & 423.** Handmade by **Karolina Heikura (Larienne)**. Traditional art made with mixed media. Each of the two pages measures 29.6 x 21 cm. Private Collection. (Agnese is the young woman wearing jeans, Zafeiria is the young woman wearing shorts, and Saba is the young woman wearing a dress.) (In this illustration, the following species

of organisms are also included: *Beaucarnea recurvata* (Koch & Fintelmann) (Asparagales: Asparagaceae) as part of the plant collection; *Agave stricta* Zu Salm-Reifferscheidt-Dyck (Asparagales: Asparagaceae) as part of the plant collection; *Agave sisalana* Perrine (Asparagales: Asparagaceae) as part of the plant collection; *Opuntia leucotricha* De Candolle (Caryophyllales: Cactaceae) as part of the plant collection; *Ferocactus emoryi* (Engelmann) (Caryophyllales: Cactaceae) as part of the plant collection; and *Cereus jamacaru* De Candolle (Caryophyllales: Cactaceae) as part of the plant collection.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Calocedrus decurrens* (Torrey) (Cupressales: Cupressaceae), the source of the incense cedar wood of the pencils; *Nelumbo nucifera* Gärtner (Proteales: Nelumbonaceae), the source of the lotus silk of Zafeiria's designer crop top; *Cannabis sativa* Linnaeus (Rosales: Cannabaceae), the source of the hemp of Agnese's designer crop top; *Eucalyptus grandis* Hill (Myrtales: Myrtaceae), the source of the cellulose of the notebooks; *Gossypium barbadense* Linnaeus (Malvales: Malvaceae), the source of the cotton of the denim of Agnese's designer jeans and of Zafeiria's designer shorts; *Bos taurus* Linnaeus (Artiodactyla: Bovidae), the source of the high-quality calfskin leather of the designer shoes and belts of the young women; and *Samia cynthia* (Drury) (Lepidoptera: Saturniidae), the source of the eri silk of Saba's designer dress.) **Note 1:** The species in the plant collection are based on the species listed in the work by Rae et al. (2006) titled "Royal Botanic Garden Edinburgh: catalogue of plants 2006." **Note 2:** I like Agnese's belly. She looks lovely! I love her! I like Zafeiria's belly and legs. She looks gorgeous! I love her! I like Saba's legs. She looks beautiful! I love her!

CHAPTER 20. *Homo neanderthalensis*

***Homo neanderthalensis* King, 1864 (Primates: Hominidae)** (2024). **Page 435.** Handmade by **Yasamin Rahmani (Madam Aphrodite)**. Traditional art made with watercolors. 41.5 x 29.4 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Picea orientalis* (Linnaeus) (Pinales: Pinaceae), the source of the firewood; *Pinus sylvestris* Linnaeus (Pinales: Pinaceae), the source of the Scots pine fiber of the headband of the woman; *Arundo donax* Linnaeus (Poales: Poaceae), the source of the shaft of the spear; and *Pyrrhocorax pyrrhocorax* (Linnaeus) (Passeriformes: Corvidae), the source of the feathers in the headdress of the woman.) **Note 1:** I did not list the source of the dye because the red pigment made by Neanderthal peoples had a mineral origin. You can read this in the paper by Roebroeks et al. (2012) titled "Use of Red Ochre by Early Neandertals." It was published in the "Proceedings of the National Academy of Sciences of the United States of America" 109(6): 1889–1894. **Note 2:** Neanderthals depicted their own hands in art. You can read this in the paper by Standish et al. (2025) titled "The Age of Hand Stencils in Maltravieso Cave (Extremadura, Spain) Established by U-Th Dating, and its Implications for the Early Development of Art." It was published in the "Journal of Archaeological Science: reports" 61(1): 104891. However, as far as I know, Neanderthals did not paint realistic portraits of themselves. As Neanderthal ethnicity has disappeared, all portraits are reconstructed by archeologists. This painting is based on the skeleton reconstruction in the review by Reilly et al. (2022) titled "The Contribution of Neanderthal Introgression to Modern Human

Traits." It was published in "Current Biology" 32(18): R970–R983. **Note 3:** You can read more about this painting on **page 799.**

Michael Swann Building, Edinburgh, Scotland, United Kingdom (2025). **Page 443.** Handmade by **Hugo Arboleya**. Traditional art made with mixed media. 41.7 x 29.7 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Pinus sylvestris* Linnaeus (Pinales: Pinaceae) as the trees behind the blue fence; *Taxus baccata* Linnaeus (Cupressales: Taxaceae) as the few branches and leaves of the hedge that almost cannot be seen; *Prunus laurocerasus* Linnaeus (Rosales: Rosaceae) as the short groundcover; and *Acer pseudoplatanus* Linnaeus (Sapindales: Sapindaceae) as the closest tall tree.)

CHAPTER 21. *Amicia zygomeris*

***Amicia zygomeris* De Candolle, 1825 (Fabales: Fabaceae)** (2022). **Page 459.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

CHAPTER 22. *Thysania agrippina*

***Thysania agrippina* (Cramer, 1776) (Lepidoptera: Erebidae)** (2024). **Page 487.** Handmade by **Elen Stefanidou (Ansekenamun)**. Traditional art made with oil. 31.8 x 24.3 cm. Private Collection. (In this illustration, the following species of organism is also included: *Homo sapiens* Linnaeus (Primates: Hominidae).)

CHAPTER 23. *Danio rerio*

***Danio rerio* (Buchanan-Hamilton, 1822) (Cypriniformes: Danionidae)** (2022). **Page 511.** Handmade by **Aslam Narváez**. Traditional art made with oil. 30.3 x 25.3 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Oscillatoria limosa* Agardh ex Gomont (Oscillatoriales: Oscillatoriaceae) as part of the periphyton; *Phormidium ambiguum* Gomont (Oscillatoriales: Oscillatoriaceae) as part of the periphyton; *Lyngbya allorgei* Frémy (Oscillatoriales: Oscillatoriaceae) as part of the periphyton; *Oedogonium epiphyticum* Transeau & Tiffany (Oedogoniales: Oedogoniaceae) as part of the periphyton; *Stigeoclonium tenue* (Agardh) (Chaetophorales: Chaetophoraceae) as part of the periphyton; *Cladophora glomerata* (Linnaeus) (Cladophorales: Cladophoraceae) as part of the periphyton; *Aponogeton crispus* Thunberg (Alismatales: Aponogetonaceae) as aquatic plants; *Alaucoseira granulata* (Ehrenberg) (Alaucoseirales: Alaucoseiraceae) as part of the periphyton; *Cyclotella meneghiniana* Kützing (Stephanodiscales: Stephanodiscaceae) as part of the periphyton; *Nitzschia palea* (Kützing) (Bacillariales: Bacillariaceae) as part of the periphyton; and *Navicula recens* (Lange-Bertalot) (Naviculales: Naviculaceae) as part of the periphyton.)

CHAPTER 24. *Somateria spectabilis*

***Somateria spectabilis* (Linnaeus, 1758) (Anseriformes: Anatidae)** (2025). **Page 537.** Handmade by **Lorena Medina**. Traditional art made with watercolors. 57 x 39 cm. Private Collection. (In this illustration, the following species of organism is also included: *Carex subspathacea* Wormskjold ex Hornemann (Poales: Cyperaceae).)

CHAPTER 25. *Capra hircus*

***Capra hircus* Linnaeus, 1758 (Artiodactyla: Bovidae)** (2023). **Page 569.** Handmade by **Javier Montesinos Medrano**. Traditional art made with mixed media. 47.5 x 33.5 cm. Private Collection. (In this illustration, there are organs depicted as religious symbols. These are the species and the organs: *Iris pseudacorus* Linnaeus

(Asparagales: Iridaceae), shown as the stylized yellow flag iris flowers that are the symbols known as fleur-de-lis.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Acacia koa* Gray (Fabales: Fabaceae), the source of the precious koa wood of the table and of the wall cabinet; *Vipera ammodytes* (Linnaeus) (Squamata: Viperidae), the snake wet specimen; and *Gigantometrus swammerdami* (Simon) (Scorpiones: Scorpionidae), the scorpion wet specimen.)

CHAPTER 26. *Narcissus hispanicus*

***Narcissus hispanicus* Gouan, 1773 (Asparagales: Amaryllidacea)** (2021). **Page 597.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

CHAPTER 27. *Pisum sativum*

***Pisum sativum* Linnaeus, 1753 (Fabales: Fabaceae)** (2021). **Page 623.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

Part Four: Final Boss: The Princess of the Wraiths

***Dugong dugon* (Müller, 1776) (Sirenia: Dugongidae)** (2023). **Page 641.** Handmade by **Javier Montesinos Medrano**. Traditional art made with mixed media. 47.5 x 33.5 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Linum usitatissimum* Linnaeus (Malpighiales: Linaceae), the source of the cellulose of the leaves of the books; *Dalbergia odorifera* Chen (Fabales: Fabaceae), the source of the precious huanghuali rosewood of the table and of the wall-mounted bookcase; and *Capra hircus* Linnaeus (Artiodactyla: Bovidae), the source of the goatskin leather of the book covers.)

Portrait of the second Birgitta, the princess of the wraiths (2022). **Page 642.** Handmade by **Erick Olvera Lemus (Taner)**. Traditional art made with pencil. 27.9 x 21.6 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Cucurbita pepo* Linnaeus (Cucurbitales: Cucurbitaceae), the source of the Jack-o'-lanterns; *Python molurus* (Linnaeus) (Squamata: Pythonidae), the source of the luxury Indian python leather of the designer shoes of Birgitta the Second; and *Bombyx mori* (Linnaeus) (Lepidoptera: Bombycidae), the source of the mulberry silk of the designer dress of Birgitta the Second.) **Note 1:** Jack-o'-lanterns are depictions of ghosts or demons. You can read about their origins in the essay by Dean and Dean (2024) titled "Jack-O'-Lanterns, Will-O'-the-Wisps, and Ignis Fatuus: making sense of ghost lights." It was published in the "Journal for the Study of Religious Experience" 10(1): 32–46. **Note 2:** Birgitta the Second looks so freaking scary!

***Cucurbita pepo* Linnaeus, 1753 (Cucurbitales: Cucurbitaceae)** (2021). **Page 643.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

CHAPTER 28. Fighting the Princess of the Wraiths

***Lagenaria siceraria* (Molina, 1782) (Cucurbitales: Cucurbitaceae)** (2021). **Page 645.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

Appendices

***Gyps indicus* (Scopoli, 1786) (Accipitriformes: Accipitridae)** (2024). **Page 659.** Handmade by **Jonatas Ferreira**. Traditional art made with mixed media. 42 x 29.7 cm. Private Collection. (In this illustration, the following species of organism is also included: *Sterculia urens* (Roxburgh) (Malvales: Malvaceae).) **Note:** You can read more about this painting on **page 782.**

Portrait of Mariana, the cousin of Héctor Jaramillo (2024). **Page 660.** Handmade by **Helga Nagy (Lèda Havasi)**. Traditional art made with watercolors. 29.5 x 21 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Zoysia japonica* Von Steudel (Poales: Poaceae) as Mariana's sacred herb; and *Papaver somniferum* Linnaeus (Ranunculales: Papaveraceae) as Mariana's sacred herb.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Neltuma laevigata* (Humboldt & Bonpland ex Willdenow) (Fabales: Fabaceae), the source of the smooth mesquite wood of the hourglass; *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the cotton of the denim of Mariana's skirt; and *Bos indicus* Linnaeus (Artiodactyla: Bovidae), the source of the low-quality cowhide leather of Mariana's belt.) **Note 1:** The shoes, bra, and hat are synthetic. **Note 2:** I like Mariana's belly. Mariana looks attractive! I love her!

***Papaver somniferum* Linnaeus, 1753 (Ranunculales: Papaveraceae)** (2022). **Page 661.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

Appendix A

***Medicago sativa* Linnaeus, 1753 (Fabales: Fabaceae)** (2022). **Page 663.** Handmade by **Irina Korobeichuk**. Traditional art made with watercolors. 40 x 30 cm. Private Collection.

Appendix B

***Potamon mesopotamicum* Brandis et al. 1998 (Decapoda: Potamidae)** (2024). **Page 673.** Handmade by **Adriana Carrasco Salgado (adrialychnis)**. Traditional art made with watercolors. 29.6 x 22.4 cm. Private Collection. (In this illustration, the following species of organism is also included: *Cladophora glomerata* (Linnaeus) (Cladophorales: Cladophoraceae).)

Appendix C

***Taenia solium* Linnaeus, 1758 (Cyclophyllidea: Taeniidae)** (2022). **Page 677.** Handmade by **Rafael Calderón**. Traditional art made with pencil. 28 x 21.5 cm. Private Collection.

Appendix D

***Vanilla planifolia* Andrews, 1808 (Asparagales: Orchidaceae)** (2024). **Page 707.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.4 x 21.4 cm. Private Collection. **Note:** ICQ was the most popular instant messaging application in 2000 and 2001. You can read about it in the paper by Leung (2001) titled "College Student Motives for Chatting on ICQ." It was published in "New Media & Society" 3(4): 483–500. Mariana's ICQ nickname was =xanath=. "Xánat" means "flower" in Papantla Totonac. It was the name of a fairytale princess that became a vanilla plant. This is a folktale. It was written down in the 20th century by José Núñez y Domínguez. His version is transcribed in the article by Rodríguez López (2016) titled "La Vainilla (*Vanilla planifolia*): perfume y sabor de México que conquistó al mundo: I: historia de la vainilla." It was published in "Desde el Herbario CICY" 8: 89–92."

Appendix E

***Rzedowskia tolantonguensis* González Medrano, 1981 (Celastrales: Celastraceae)** (2023). **Page 713.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.5 x 22 cm. Private Collection. **Note:** Professor Jerzy Rzędowski discovered this plant on Monday the 21st of January 1957 while he was looking for plants in the County of Cárdenas, San Luis Potosí, Mexico. His friend, Professor Francisco González Medrano, named it after him. González Medrano stated that "The genus is dedicated to Dr. Jerzy Rzędowski of Escuela Nacional de Ciencias Biológicas del Instituto Politécnico Nacional, as a recognition to his extraordinary and fruitful work in favor of attaining knowledge of the flora and vegetation of Mexico." González Medrano (1981) wrote this in the protologue of this species titled "*Rzedowskia*, un Nuevo Género de Celastraceae de México." It was published in "Boletín de la Sociedad Botánica de México" 41: 41–46. I decided to commission an illustration of this plant to pay my respects to Professor Rzędowski, who is honored in Appendix E.

Appendix F

***Tiktaalik roseae* Daeschler et al. 2006 (Elpistostegalia: Tiktaalikidae fam. nov.)** (2024). **Page 717.** Handmade by **Megan McDermott (Violet Vyxen)**. Traditional art made with mixed media.35.5 x 28 cm. Private Collection. (In this illustration, the following species of organism is also included: *Homo sapiens* Linnaeus (Primates: Hominidae) as the painter.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Liriodendron tulipifera* Linnaeus (Magnoliales: Magnoliaceae), the source of the American tulipwood of the floor; *Phyllostachys edulis* (Carrière) (Poales: Poaceae), the source of the fabric of the designer crop top and skirt of the painter; *Cannabis sativa* Linnaeus (Rosales: Cannabaceae), the source of the canvases; *Fagus sylvatica* Linnaeus (Fagales: Fagaceae), the source of the European beech wood of the easel, of the drawing boards, and of the paintbrush handle; *Juglans regia* Linnaeus (Fagales: Juglandaceae), the source of the walnut oil mixed with the dark mineral pigments of the paintings; *Cedrela odorata* Linnaeus (Sapindales: Meliaceae), the source of the Spanish cedar wood of the baseboard; *Dianthus caryophyllus* Linnaeus (Caryophyllales: Caryophyllaceae), the source of the carnation flowers in the vase; *Diospyros ebenum* König (Ericales: Ebenaceae), the source of the precious Ceylon ebony wood of the bench; *Carthamus tinctorius* Linnaeus (Asterales: Asteraceae), the source of the safflower oil mixed with the light mineral pigments of the paintings; *Mustela sibirica* Pallas (Carnivora: Mustelidae), the source of the kolinsky sable-hair of the paintbrush; and *Bos taurus* Linnaeus (Artiodactyla: Bovidae), the source of the high-quality calfskin leather of the designer shoes of the painter.) **Note:** *Tiktaalik roseae* is extinct, and no human saw it alive. Therefore, all depictions are reconstructions by paleontologists. This painting is based on the skeleton reconstruction in the paper by Stewart et al. (2024) titled "The Axial Skeleton of *Tiktaalik roseae*." It was published in the "Proceedings of the National Academy of Sciences of the United States of America" 121(15): e2316106121.

Warning

Suggestion (2025) **Page 740.** Handmade by **Marta (Hagane).** Traditional art made with mixed media. 29.7 x 21 cm. Private Collection. (In this illustration, the following species of organisms are included: *Tetrastigma leucostaphylum* (Dennstedt) (Vitales: Vitaceae) as the host plant; *Rafflesia arnoldii* Brown (Malpighiales: Rafflesiaceae) as the parasitic

plant; and *Homo sapiens* Linnaeus (Primates: Hominidae).) (In this illustration, there are natural products obtained from a living organism. They were obtained from this species: *Gossypium hirsutum* Linnaeus (Malvales: Malvaceae), the source of the cotton of the denim of the jeans of the nubile young woman; and *Bos indicus* Linnaeus (Artiodactyla: Bovidae), the source of the low-quality cowhide leather of the shoes.) **Note:** The bra is synthetic.

End of Memoir (You may want to continue reading the next pages, the scientific part of this book) (2025) **Page 741.** Handmade by **Ignacio Panelo**. Traditional art made with mixed media. 27.9 x 21.5 cm. Private Collection. (In this illustration, the following species of organism is included: *Homo sapiens* Linnaeus (Primates: Hominidae) as the ecologist.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Aeschynomene aspera* Linnaeus (Fabales: Fabaceae), the source of the sholapith of the pith helmet; *Gossypium arboreum* Linnaeus (Malvales: Malvaceae), the source of the cotton fabric of the pith helmet; and *Bos indicus* Linnaeus (Artiodactyla: Bovidae), the source of the low-quality cowhide leather of the shoes. **Note 1:** The net and the fabrics of the clothes are synthetic. **Note 2:** She is an ecologist. You can learn about ecology in the textbook by Bowman and Hacker titled "Ecology" (sixth edition, 2023). Ecologists often sample organisms from ecosystems. That is why she has a net. I commissioned an ecologist because the last part of the book is scientific.

***Cirsium vulgare* (Savi, 1798) (Asterales: Asteraceae)** (2023). **Page 743.** Handmade by **Albino Adelaido Luna**. Traditional art made with watercolors. 28.5 x 22 cm. Private Collection. **Note:** According to an old legend, when Scandinavian warriors were waging a war against the Scots, the Scandinavians wanted to ambush the Scottish army while the soldiers were sleeping at night. A Scandinavian soldier was hurt by a leaf of a thistle. The soldier yelled in pain and the Scottish soldiers woke up. Therefore, the thistle is the national plant of Scotland. You can read this story in a letter to the editor by Denson (1832) titled "The Thistle of Scotland." It was published in "The Gardener's Magazine, and register of rural & domestic improvement" 8: 335–336. As Edinburgh is the capital city of Scotland, a thistle is displayed on the coat of arms of the University of Edinburgh. You can read about this coat of arms in the article by Barden (1961) titled "Edinburgh's Academic Heraldry." It was published in "University of Edinburgh Gazette" 30: 11–17. University of Edinburgh students are required to display the university's coat of arms at the beginning of their theses or dissertations. This is what our professor told my class (Peter Fantes, personal communication). Therefore, I decided to commission a painting of a spear thistle to display it before my university dissertation in this book. I did this, instead of displaying a coat of arms, to follow the same art style as in the other chapters and appendices. They always start with illustrations of species of organisms. The spear thistle is the species that is shown as the Scottish emblem. This is according to Dickson and Walker (1981) in their article titled "What is the Scottish Thistle?" It was published in "The Glasgow Naturalist" 20(2): 101–121.

Appendix G

***Caenorhabditis elegans* (Maupas, 1900) (Rhabditida: Rhabditidae)** (2022). **Page 745.** Handmade by **Rafael Calderón**. Traditional art made with pencil. 28 x 21.7 cm. Private Collection.

Figure 3. (2009). **Page 749.** Digitally made by **Peregrinus Hierusalemsis (I, the author of**

this book). Digital art made with "Microsoft Paint" from "Windows Vista" (2006). 33.2 KB. School of Biological Sciences, College of Science & Engineering, The University of Edinburgh. (In this illustration, the following species of organism is included: *Rana temporaria* Linnaeus (Anura: Ranidae).) **Note:** Figure 3 was modified in 2024 to publish it as part of this book. Now the typefaces are **"EB Garamond"** (2011) and **"IBM Plex Sans"** (2017). In 2009, I designed and drew the typeface. However, its kerning was horrible, so I changed it.

Appendix H

***Mantellisaurus atherfieldensis* (Hooley, 1925) (Ornithopoda: Incertae Sedis)** (2024). **Page 759.** Handmade by **Alaitz Uriagereka Blanco (Anima Eterna)**. Traditional art made with watercolors. 45 x 30 cm. Private Collection. (In this illustration, the following species of organism is also included: *Homo sapiens* Linnaeus (Primates: Hominidae) as the gentlewoman.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Calamus scipionum* De Loureiro (Arecales: Arecaceae), the source of the Malacca wood of the luxury umbrella; *Astronium fraxinifolium* Schott (Sapindales: Anacardiaceae), the source of the precious Gonçalo Alves wood of the frames; *Pinctada radiata* (Leach) (Ostreida: Margaritidae), the source of the pearls of the luxury hair jewelry and earrings of the gentlewoman; *Pinctada margaritifera* (Linnaeus) (Ostreida: Margaritidae), the source of the mother-of-pearl of the buttons of the haute couture dress of the gentlewoman; and *Bombyx mori* (Linnaeus) (Lepidoptera: Bombycidae), the source of the mulberry silk of the haute couture dress and of the luxury umbrella of the gentlewoman.) **Note 1:** *Mantellisaurus atherfieldensis* is extinct, and no human saw it alive. Therefore, all depictions are reconstructions by paleontologists. This *Mantellisaurus atherfieldensis* reconstruction is outdated. This is how Gideon Mantell thought it was. At that time, it was classified as belonging to the genus *Iguanodon* Mantell (Ornithopoda: Iguanodontidae). You can see this old reconstruction in the book by Mantell titled "The Wonders of Geology; or, a familiar exposition of geological phenomena" (volume 1, 1838). **Note 2:** As this *Mantellisaurus atherfieldensis* sculpture is a 19th century reconstruction, the gentlewoman is a 19th century European aristocrat. **Note 3:** You can read more about this painting on **page 763.**

Figure 4 (2025). **page 795.** Handamde by **Néstor E. Altamirano (Camus Altamirano)**. Traditional art made with colored pencils. 30.5 x 22.8 cm. Private Collection. (In this illustration, the following species of organism is included: *Ara militaris* (Linnaeus) (Psittaciformes: Psittacidae).

Appendix I

'*Candidatus* Altiarchaeum hamiconexum' Probst et al., 2014 ('*Candidatus* Altiarchaeales: ' '*Candidatus* Altiarchaeaceae') (2025). **Page 831.** Handmade by made by **Peregrinus Hierusalemsis (I, the author of this book).** Traditional art made with India ink. 40 x 28 cm. Private Collection. **Note:** In the past, only species of cultured prokaryotes could be named. Hence, the word "*Candidatus*" was employed to discuss species that could not be formally described. This was suggested by Murray and Schleifer (1994) in their essay titled "Taxonomic Notes: a proposal for recording the properties of putative taxa of procaryotes." It was published in the "International Journal of Systematic Bacteriology" 44(1): 174–176.

Glossary, list of illustrations, and index

***Tridacna gigas* (Linnaeus, 1758) (Cardiida: Cardiidae)** (2023). **Page 839.** Handmade by **Rafael Calderón**. Traditional art made with mixed media. 28 x 21.5 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Stylissa carteri* (Dendy) (Scopalinida: Scopalinidae); *Litophyton elfordensis* Van Ofwegen (Malacalcyonacea: Nephtheidae); *Pocillopora verrucosa* (Ellis & Solander) (Scleractinia: Pocilloporidae); *Lobophyllia recta* (Dana) (Scleractinia: Lobophylliidae); *Goniastrea edwardsi* Chevalier (Scleractinia: Merulinidae); *Porites lobata* Dana (Scleractinia: Poritidae); *Montipora foliosa* (Pallas) (Scleractinia: Acroporidae); *Acropora retusa* Dana (Scleractinia: Acroporidae) and *Didemnum molle* (Herdman) (Aplousobranchia: Didemnidae).)

Portrait of Asia the Mystic (2022). **Page 840.** Handmade by **Dorina Neméskeri**. Traditional art made with acrylic paints. 40 x 29.6 cm. Private Collection. (In this illustration, the following species of organism is also included: *Macrochelys temminckii* (Troost) (Testudines: Chelydridae) as Asia's sacred turtle.) (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Nymphaea caerulea* Savigny (Nymphaeales: Nymphaeaceae), the source of Asia's Egyptian blue waterlily flower; and *Bos taurus* Linnaeus (Artiodactyla: Bovidae), the source of the low-quality cowhide leather of Asia's shoes.) **Note 1:** Fabrics are synthetic. **Note 2:** The halo is a symbol of divinity. According to Pseudo-Dionysius in "De Coelesti Hierarchia," God YHWH (Allah) illuminates His messengers with His holy light and they in turn irradiate it. **Note 3:** Asia looks angelic! I love her!

***Macrochelys temminckii* (Troost, 1835) (Testudines: Chelydridae) Page 841.** (2024). Handamde by **Néstor E. Altamirano (Camus Altamirano)**. Traditional art made with colored pencils. 30.3 x 22.7 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Basicladia chelonum* (Collins) (Cladophorales: Phitophoraceae) as an epizootic chlorophyte alga; *Nitzschia inconspicua* Grunow (Bacillariales: Bacillariaceae) as an epizootic diatom; *Nitzschia amphibia* Grunow (Bacillariales: Bacillariaceae) as an epizootic diatom; *Caloneis bacillum* (Grunow) (Naviculales: Naviculaceae) as an epizootic diatom; and *Gomphonema parvulum* (Kützing) (Cymbellales: Gomphonemataceae) as an epizootic diatom.)

Taxonomic Glossary of Scientific Names of Organisms

Witch (2025). **Page 843.** Handmade by **Kenneth Day.** Traditional art made with markers. 27.9 x 21.5 cm. Private Collection. (In this illustration, there are natural products obtained from living organisms. They were obtained from these species: *Abies alba* Miller (Pinales: Pinaceae), the source of the vegetative organs, that suffered from witches' broom disease, that were used to make the broom head of the broomstick; *Rubus ulmifolius* Schott (Rosales: Rosaceae), the source of the elmleaf blackberry stems that tie the broom; *Quercus robur* Linnaeus (Fagales: Fagaceae), the source of the English oak wood of the handle of the broomstick; and *Melampsorella elatina* (Albertini & Schweinitz) (Pucciniales: Pucciniastraceae), the fungal infection that caused the witches' broom disease of the vegetative organs that were used to make the broom head of the broomstick. **Note 1:** According to some old wives' tales, witches fly using broomsticks. You can read about this

superstition in the book by Del Río (1599) titled "Disquisitionum Magicarum Libri Sex." **Note 2:** Some pathogenic fungi can cause witches' broom disease. These abnormal growths are used to make broom heads of broomsticks. You can read about this in the paper by Nedelcheva et al. (2007) titled "Plants Traditionally Used to Make Brooms in Several European Countries." It was published in the "Journal of Ethnobiology and Ethnomedicine" 3: 20.

Western dragon (2022). **Page 845** Handmade by **Alan Monroy Ojeda**. Traditional art made with ink. 37.8 x 34.8 cm. Private Collection. **Note:** You can read about ancient Mesopotamian dragons in the essay by Watanabe (2015) titled "The Symbolic Role of Animals in Babylon: contextual approach to the lion, the bull, and the mušḫuššu." It was published in "IRAQ" 77: 215–224.

Labels and credits of illustrations

Phoenix (2023). **Page 847.** Handmade by **Alan Monroy Ojeda**. Traditional art made with ink. 35 x 25.3 cm. Private Collection. (In this illustration, there is a natural product obtained from a living organism. This is the species: *Struthio camelus* Linnaeus (Struthioniformes: Struthionidae), the source of the two feathers of the atef.) **Note 1:** Atef is the crown worn by King Osiris the Khenti-Amentiu in ancient Egyptian religion: . You can read this in the ancient Egyptian magical spell known as "Coffin Text 313." You can read it in the work by De Buck (1951) titled "The Egyptian Coffin Texts IV. Texts of Spells 268–354." It was published in "The University of Chicago Oriental Institute Publications" 67: 1–413. **Note 2:** You can read about the Phoenix in the essay by Nigg (2009) titled "Transformations of the Phoenix: from the Church fathers to the bestiaries." It was published in "Ikon" 2: 93–102. **Note 3:** You can read more about this painting on **page 765.**

Ahuizotl (2023). **Page 873.** Handmade by **Alan Monroy Ojeda**. Traditional art made with ink. 28 x 25 cm. Private Collection. (In this illustration, the following species of organism is also included: *Ceratophyllum demersum* Linnaeus (Ceratophyllales: Ceratophyllaceae).) **Note:** The Ahuizotl is a scary Mexican ghost and monster! You can read its horror story in the book by Sahagún (1585) titled "Historia General de las Cosas de Nueva España."

Index

The barnacle tree (2023). **Page 875.** Handmade by **Alan Monroy Ojeda**. Traditional art made with ink. 34.8 x 25 cm. Private Collection. (In this illustration, the following species of organisms are also included: *Branta leucopsis* (Bechstein) (Anseriformes: Anatidae); and *Lepas anatifera* Linnaeus (Scalpellomorpha: Lepadidae).) **Note 1:** According to an old legend, there is a tree that produces crustaceans instead of fruits. When they grow, they become geese. You can read about this in the book by Pope Pius II (1458) titled "De Europa." **Note 2:** You can read more about this painting on **page 767.**

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Ahuizotl

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